

COATED ABRASIVE BASICS

COATED ABRASIVE GRIT COMPARISON CHART

AVERAGE PARTICLE SIZE IN MICRONS	CAMI	GRADING SYSTEMS (OTHER THAN EMERY)	JIS	EMERY PRODUCTS
		FEP		
5.0	-	-	-	-
6.0	-	-	3000	-
6.5	1200	-	2500	4/0
8.4	-	P2500	-	-
8.5	-	-	2000	-
9.2	1000	-	-	3/0
10.3	-	P2000	-	-
10.5	-	-	1500	-
12.2	800	-	1200	-
12.6	-	P1500	-	-
15.0	-	-	-	-
15.3	-	P1200	1000	-
16.0	600	-	-	2/0
18.3	-	P1000	800	-
19.7	500	-	-	0
20.0	-	-	-	-
21.8	-	P800	-	-
23.6	400	-	600	-
25.0	-	-	-	-
25.75	-	P600	-	-
28.8	360	-	500	-
30.0	-	P500	-	-
35.0	-	P400	400	-
36.0	320	-	-	-
40.0	-	-	360	-
40.5	-	P360	-	-
44.0	280	-	-	1
45.0	-	-	-	-
46.2	-	P320	320	-
50.0	-	-	-	-
52.5	-	P280	280	-
53.5	240	-	-	-
55.0	-	-	-	-
58.5	-	P240	-	-
60.0	-	-	240	-
64.0	-	-	-	2
65.0	-	P220	220	-
66.0	220	-	-	-
78.0	180	P180	180	-
79.0	-	-	-	3
93.0	150	-	150	-
95.0	-	-	-	FINE
97.0	-	P150	-	-
116.0	120	-	120	-
127.0	-	P120	100	-
136.0	-	-	-	MEDIUM
141.0	100	-	-	-
156.0	-	P100	-	-
189.0	-	-	-	COARSE
192.0	80	-	80	-
197.0	-	P80	-	-
260.0	-	P60	-	-
268.0	60	-	60	-
326.0	-	P50	50	-
341.0	-	-	-	EX. COARSE
351.0	50	-	-	-
412.0	-	P40	40	-
428.0	40	-	-	-
524.0	-	P36	-	-
535.0	36	-	36	-
622.0	-	P30	-	-
638.0	30	-	30	-
715.0	24	-	-	-
740.0	-	P24	24	-
905.0	20	-	-	-
984.0	-	P20	20	-
1320.0	16	-	16	-
1324.0	-	P16	-	-
1764.0	-	P12	-	-
1842.0	12	-	-	-

BACKING TYPES

Backings are the base for the abrasive minerals and, combined with the adhesive bond, support and anchor the abrasive mineral. The backings used in the manufacture of coated abrasives are:

PAPER

Due to the fine surface of paper, a consistent finish is produced. Paper weights include *A, B, C, D, E* and *F* weights with *A* being the lightest and most flexible and *F* being the heaviest and least flexible. *A, B, C* and *D* weight papers are used for hand sanding and light mechanical operations in the form of sheets, Speed-Grip and PSA discs and sheet rolls. *E* and *F* weight papers are primarily used for more aggressive mechanical operations in the form of belts and discs.

CLOTH

Cloth backings used for coated abrasives are identified by weight. Cloth backings are filled or "finished" with a variety of materials (glues or resins) to create various backing characteristics, most notably flexibility. Several cloth types are used: cotton, polyester, polyester/nylon and polyester/cotton blends, and rayon.

There are three basic weights of cloth: *J*-weight or "jeans" is the lightest and most flexible. *X*-weight or "drills" is a heavier cloth that ranges in flexibility, strength and durability and is used on the broadest range of applications. *Y*-weight is a heavyweight drills cloth used on heavy-duty, high stock removal operations.

FIBRE

Vulcanized fibre (cotton fibres which are chemically treated and then pressed under temperature and pressure to form a very durable backing) is used exclusively as the backing for resin fibre discs.

FILM

Polyester film backing comes in 3 mil. and 5 mil. thicknesses, which have high strength and surface smoothness. They are used primarily in disc and roll applications requiring consistent surface finish.

BOND TYPES

An adhesive bond system is required to secure the abrasive mineral to the backing. All coated abrasive products are made with a two stage bonding process, the *make coat* and the *size coat*.

The *make coat* is the first layer of bond applied to the backing. The make coat provides the adhesive base between the abrasive mineral and the backing.

The *size coat* is the second coat, which is applied over the abrasive mineral and make coat to anchor the abrasive mineral and provide the desired physical strength of the finished product.

Glue, urea resin and *phenolic resin* are the three basic bonding agents most commonly used. There are many size coat and make coat combinations, such as *glue over glue, urea over glue, and resin over resin*. *Glue over glue* is the most flexible bond while *resin over resin bond* is moisture resistant, harder, less flexible, heat-resistant and has superior grain retention.

COATING TYPES

There are two types of abrasive coatings used in the manufacturing of coated abrasives: *open coat* and *closed coat*.

OPEN COAT

With an open coat, 50% to 75% of the surface is covered by abrasive grain. There are evenly spaced voids between particles of grain, helping reduce the effect of loading caused by wood dust or metal particles.



OPEN COAT
(1/3 LESS GRAIN THAN CLOSED)

CLOSED COAT

With a closed coat, the entire surface is covered with abrasive grain, with no voids between the particles. This is the most typical coating, permitting the greatest degree of stock removal and longest product life.



CLOSED COAT

PAPER DISCS AND ACCESSORIES

For use on random orbital and rotary sanders. The industry's highest performance and broadest selection of paper discs in Stick and Sand disc rolls, Speed-Grip (hook and loop) discs, PSA (pressure sensitive adhesive) discs and standard discs.



ORBITAL SANDER



VERTICAL SHAFT GRINDER

Typical Applications

- Preparing primed and painted surfaces for finishing
- Stripping primer and paint
- Sanding of plastic and fiberglass
- Light weld blending and deburring
- Bare wood sanding
- Finishing metal of all types



BEST No-Fil Norton SG A975 – For the most demanding DA sanding applications

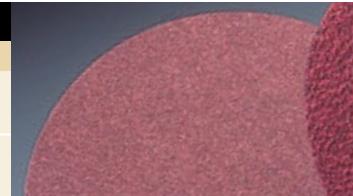


FEATURES	BENEFITS
• Patented Norton SG ceramic aluminum oxide abrasive, P-graded	• Fastest cut rate; longest life • Consistent finish
• Unique fibre-reinforced, B-wt latex-saturated backing	• 50-60% improvement in tear strength • Flexible; can be used wet
• Water-based stearate, non-pigmented, No-Fil coating	• Provides maximum load resistance and extended life; no color transfer to work



BEST Norton SG H920 – For more demanding metal finishing applications

FEATURES	BENEFITS
• Patented Norton SG ceramic aluminum oxide abrasive	• Maximum life; fast aggressive cutting action, yet cool cutting
• Strong F-wt paper, synthetic-coated	• Maximum durability and chip resistance, ideal for soldered and welded areas, and body-in-white applications



BETTER No-Fil Champagne A275 – The performance leader in dry finishing discs

FEATURES	BENEFITS
• Premium P-graded, heat treated aluminum oxide abrasive	• Superior life, fast cut rate, consistent finish
• Unique fibre-reinforced, B-wt latex-saturated backing	• 50-60% improvement in tear strength • Flexible; can be used wet
• Water-based stearate, non-pigmented, No-Fil coating	• Provides maximum load resistance and extended life; no color transfer to work

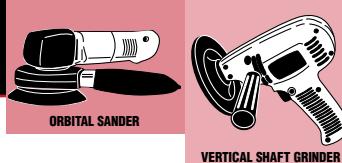


BETTER Adalox A270 – Non-stearated / non-contaminating

FEATURES	BENEFITS
• Premium P-graded, heat treated aluminum oxide abrasive	• Fast, aggressive cutting action, consistent finish
• High strength B-wt latex backing	• Superior strength and tear resistance, flexible • Eliminates delamination to back-up pad • Can be used wet
• Non-stearated (no anti-loading agents)	• Non-contaminating (often required for prime auto paint systems)



PAPER DISCS AND ACCESSORIES



ORBITAL SANDER

VERTICAL SHAFT GRINDER

BETTER NorZon Plus H822 – For more demanding metal finishing applications

FEATURES	BENEFITS
• Patented NorZon Plus zirconia alumina abrasive	• Extended life over original NorZon products
• Strong F-wt paper, synthetic-coated	• Excellent durability and chip resistance, ideal for soldered and welded areas, and body-in-white applications



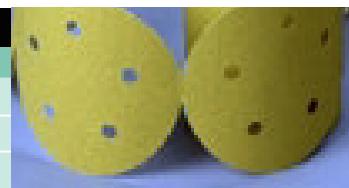
BETTER NorZon Plus H875 – Excellent for soft material applications

FEATURES	BENEFITS
• Patented NorZon Plus zirconia alumina abrasive	• Extended life over original NorZon products
• Strong E-wt paper	• Increased durability and chip resistance, flexible
• Open coat design	• Reduced loading; ideal for body-filler, fiberglass and composites



GOOD No-Fil Adalox A290 – Unrivaled durability and value for dry finishing

FEATURES	BENEFITS
• P-graded aluminum oxide abrasive	• Increased life, fast cut rate, consistent finish
• Heavy duty C-wt backing	• Edge-tear resistance, durable
• Stearated (No-Fil), open coat	• Reduced loading



GOOD No-Fil Durite A413 – General purpose versatility

FEATURES	BENEFITS
• Sharp silicon carbide abrasive	• Excellent for finishing; ideal between sealer coats
• B-wt backing	• Flexible
• Stearated (No-Fil), open coat	• Reduced loading



SpecCheck



STARTING SPECIFICATION RECOMMENDATIONS

MATERIAL	BEST PERFORMANCE	GENERAL DUTY
Unfinished Metal	H920	H822, H875
Primed and Painted Surfaces	A975, A275	A290
Fiberglass, Composites	A975, A275, H875	A290, H290
Bare Wood	A975, A275	A290
Sealer Sanding	A975, A275	A413
Paint Stripping	A975, A275, H875	A290, H290
Clear-coat Repair	T402, Q132	
Metallurgical Applications	T461	

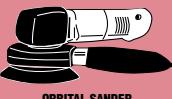
RECOMMENDED GRIT SELECTION

ROUGHING TO INTERMEDIATE	INTERMEDIATE TO FINISHING	FINE FINISHING	ULTRA FINE FINISHING
36–80	80–240	240–600	600–1200

COMPETITIVE CROSS REFERENCE - PAPER DISCS

NORTON	3M	HERMES	KLINGSPOR	MIRKA	VSM
A270	210U, 268L	—	—	Silver	—
A275	216U, 255L, 260L, 365L	HC133, HCAB	PS33	Q-Silver, Royal	—
A290	236U, 316U	HCAB	PS33, PL36	Bulldog Gold	KP911
A413	414N, 415N	PSF-LL, SA167	PL35	Carat(B)	CP131A
A975	765L, 255L, 735U	—	—	—	—
H875	750U, 751U, 740I, 745I	—	—	Royal Coarse Cut	KP510E, KP709

PAPER DISCS AND ACCESSORIES



ORBITAL SANDER

VERTICAL SHAFT GRINDER

STICK AND SAND DISC ROLLS

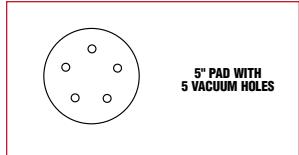
Pressure Sensitive Adhesive makes for easy application and removal.

SIZE	GRIT	STD. PKG./ DISCS/ ROLL	BEST		BETTER		BETTER		GOOD							
			A975*	VACUUM 3329/3333	H920	STD. PKG. DISCS/ ROLL	A275*	VACUUM	STD. PKG. DISCS/ ROLL	A270*	H822	H875	A290*	VACUUM	A413	
UPC NO. (PREFIX 662611)																
3-1/2	80					4/100		36376 36375 36374 36373 36372 36371 36369 36368								
	120															
	150															
	180															
	220															
	240															
	320															
	400															
5	60	4/100				49873	6/100	31464 31463 31462 31461 31460 31459 31458 31457 31456 31454 31453 31452 31451	4/100		37310 37309 37308 37307 37306 27463	24977	49831 49830 49829 49828 49827 49826 49825 49824 49823 49822 49821	30266 30265 30264 30263 30262 30261 31314 31307 30259 31311		
	80		40502	40497		49872										
	100		40501	40496		49871										
	120		40500	40495		49870										
	150		40499	40494												
	180		40498	40493												
	220		42474	49531												
6	60	4/100				49877	6/100	31481 31480 31479 31478 31477 31476 31475 31474 31473 31472 31471 31470 31469 31468	4/100		37323 37322 37321 37320 27473 27474	25573	49847 49842 49841 49840 49839 49838 49837 49836 49835 49834	30276 30275 30274 30273 30272 31362 30271 31361		
	80		40512	40507		49876										
	100		40511	40506		49875										
	120		40510	40505		49874										
	150		40509	40504												
	180		40508	40503												
	220		48340	49536												
8	60	4/100				49881*	4/100	31617								
	80					49879*										
	100							31615								
	120							31614								
	150							31613								
	180							31612								
	220							31609								
	320															

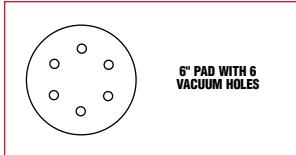
*PACKAGING STANDARDS: ROLLS PER STANDARD PACKAGE / DISCS PER ROLL 4/50

★ P-GRADED

DIE 3329



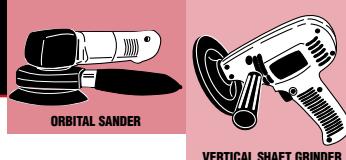
DIE 3333



See Pages 62-64 for Back-up Pads.



PAPER DISCS AND ACCESSORIES



SPEED-GRIP DISCS – HOOK AND LOOP

Reusable discs that reduce waste.

SIZE	GRIT	MIN./STD. PKG.	BEST		BETTER			GOOD						
			A975*	VACUUM 3329/ 3371	H920	A275*	VACUUM 3328/ 3371/3370	A270*	VACUUM 3328	H875	VACUUM 3370	A290*	VACUUM 3328/ 3371	A290*
UPC NO. (PREFIX 662611)														
3	80 180 220 240 320	50/200				31532 31528 31527 31526 31524								
5	40 60 80 100 120 150 180 220 240 280 320 360 400 500 600 800 1000 1200 1500	25/100 100/400	40522‡ 40521‡ 40520‡ 40519‡ 40518‡ 49541‡	40517‡ 40516‡ 40515‡ 40514‡ 40513‡ 49551‡	49864* 49865* 49866* 49867* 31549 31548 31547 31546 31545 31544 31543 31542 31541 41201 31539 31538 31537 31536 31535 31534 31533	31583 31582 31581 31580 31579 31578 31577 31576 31575 31574 31573 31572 31571 31570 27477 28489 27478 27479 27480		25684 25444•	30224 49907 49906 49905 49904 49903 49902 49900 49899	30236‡ 30235‡ 30234‡ 30233‡ 30232‡ 30231‡ 30230‡ 30227‡ 30226‡	30245‡ 30244‡ 30243‡ 30242‡ 30241‡ 30240‡ 30239‡			
6	36 40 60 80 100 120 150 180 220 240 280 320 360 400 500 600 800 1000 1200 1500	25/100 100/400	40532‡ 40531‡ 40530‡ 40529‡ 40528‡ 49546‡	40527‡ 40526‡ 40525‡ 40524‡ 40523‡ 49556‡	31566 31565 31564 31563 31562 31561 31560 31559 31558 41200 31556 31555 31554 31553 31552 31551 31550	31600 31599 31598 31597 31596 31595 31594 31593 31592 31590 31589 31588 31587		23590 23589 23588•	30225 49916 49915 49914 49913 49912 49911 49910 49940 49909 49908		30254‡ 30253‡			
8	36 40 60 80 100 180	25/100 50/250 100/400			49894 49895 49896*		31661		23593 23592 23591•	23598 23592 23596•				

PACKAGING STANDARDS:

MIN. / STD. PKG.

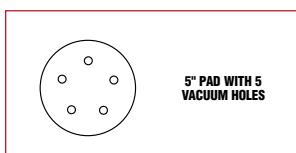
*H920 = 50/250

•H875 = 25/100

‡A975, A975 VACUUM = 50/200

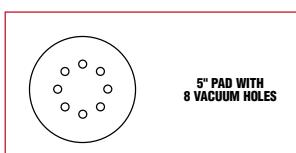
★ P-GRADED

DIE 3328



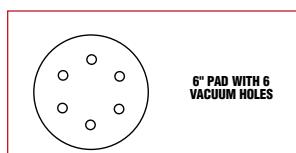
5" PAD WITH 5
VACUUM HOLES

DIE 3392



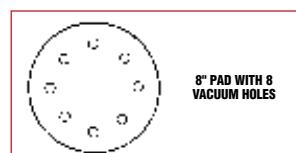
5" PAD WITH 8
VACUUM HOLES

DIE 3371



6" PAD WITH 6
VACUUM HOLES

DIE 3370



8" PAD WITH 8
VACUUM HOLES

See Pages 62-64 for Back-up Pads



ORBITAL SANDER



VERTICAL SHAFT GRINDER

INDIVIDUAL DISCS – PSA (PRESSURE SENSITIVE ADHESIVE) AND NON-PSA

SIZE	GRIT	MIN./STD. PKG.	BETTER		GOOD		BETTER		GOOD	
			PSA A275*	PSA VACUUM A275* 3370	PSA H875	PSA VACUUM H875	PSA H290*	NON PSA H875	NON PSA H290*	
5	36	50/200			66261125436	66261124920				
	40				66261125307	66261124919				
	80				66261125244	66261125508				
	1000	100/400	66261131450							
	1200		66261131449							
6	36	50/200			66261123575		66261130834‡	66261123604		
	40				66261123574	66261123580	66261130833‡	66261123603		
	80				66261123573		66261130832‡	66261123602		
	1000	100/400	66261131467							
	1200		66261131466							
8	36	25/100			66261123578	66261123584	66261130828•	66261123607	66261130831‡	
	40				66261123577	66261123583	66261130827•	66261123606	66261130830‡	
	80				66261123576	66261123582	66261130826•	66261123605		
	180	100/400	66261124483							
	320		66261125118							

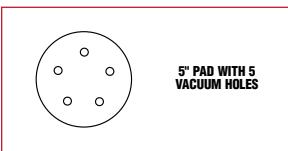
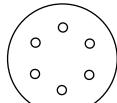
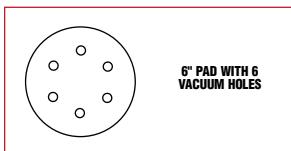
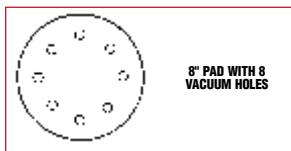
PACKAGING STANDARDS:

MIN. / STD. PKG.

‡100/400

• 50/200

★ P-GRADED

DIE 33285" PAD WITH 5
VACUUM HOLES**DIE 3371**6" PAD WITH 6
VACUUM HOLES**DIE 3370**8" PAD WITH 8
VACUUM HOLES

ACCESSORIES

PSA DISC ROLL DISPENSER

Norton disc roll dispensers feature heavy-duty construction and a rubberized finish to protect your product, as well as the finish on your workpiece. These versatile dispensers are designed to accommodate any 5" or 6" disc roll or sheet roll. They can be attached to a wall or stacked for multi-grit or multi-diameter operations. Discs are individually dispensed and removed from the roll by a cutter bar.



DESCRIPTION

STD. PKG. UPC NO.

SINGLE DISC ROLL DISPENSER

1

63642542772

DOUBLE DISC ROLL DISPENSER

1

63642502981

MEDIUM DENSITY SANDING PAD

These medium density pads are 1/2" thick with a slight tapered edge that fits all standard low speed grinders/polishers with 5/8"-11 shafts. They are firm enough for flat surfaces, yet soft enough for curved and contoured surfaces.



DESCRIPTION

MAX. RPM

STD. PKG.

UPC NO.

8" PSA

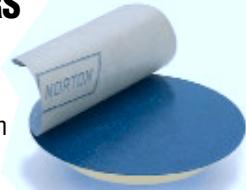
3,200

5

63642503115

TAPERED PADS FOR DUAL ACTION/RANDOM ORBITAL SANDERS

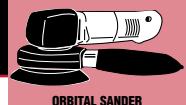
Designed with medium density polyurethane foam and a tapered edge for conformability, these pads are firm enough for flat surfaces, yet soft enough for severe curves and contours.



Available with either PSA (vinyl) or Speed-Grip (hook and loop) faces in vacuum or non-vacuum. The 5" and 6" pads are shock resistant and have a fiberglass backing plate with a riveted 5/16"-24 threaded shank for use on random orbital or dual action sanders. The 8" pad has a 5/8"-11 threaded female hub.

DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
5" PSA	12,000	5	63642503112
5" PSA WITH 5 VACUUM HOLES	12,000	5	63642503113
5" SPEED-GRIP	12,000	5	63642503119
5" SPEED-GRIP WITH 5 VACUUM HOLES	12,000	5	63642503120
5" SPEED-GRIP CHANNEL VACUUM WITH 5 HOLES	12,000	5	63642501744
6" PSA	10,000	5	63642543852
6" PSA WITH 6 VACUUM HOLES	10,000	5	63642543853
6" SPEED-GRIP	10,000	5	63642543856
6" SPEED-GRIP WITH 6 VACUUM HOLES	10,000	5	63642543857
8" PSA	6,000	5	63642543112
8" SPEED-GRIP	3,200	5	63642543704

PAPER DISCS AND ACCESSORIES



VERTICAL SHAFT GRINDER

ACCESSORIES

SPEED-GRIP PAD FOR PERFORATED DISCS

This Speed-Grip pad was designed for applications that only use the outer periphery of the discs. It allows an 8" perforated disc with die # 3064 to remove a 5" diameter disc from the center. The pad is 1/4" thick and fits all low speed standard grinders/polishers with 5/8"-11 shafts. There are two holes in the pad that enable the 5" center to be removed without taking the 8" disc off of the pad.



DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
8" SPEED-GRIP	4,800	5	63642502544

LOW PROFILE PADS FOR DUAL ACTION/ RANDOM ORBITAL SANDERS

Soft density low profile pads utilize a 1/2" thick foam for fine finish sanding and offer moderate conformability. Hard density low profile pads utilize 1/4" thick urethane foam for removal of flash and seams. Available with PSA or Speed-Grip faces. Both designs are shock resistant and have a fiberglass backing plate with a riveted 5/16"-24 threaded shank for added strength and increased heat resistance. Also available with a standard 5- and 6-hole pattern for vacuum-assist sanding.



DESCRIPTION	MAX. RPM	DENSITY	STD. PKG.	UPC NO.
5" PSA	12,000	SOFT	5	63642503087
5" PSA WITH 5 VACUUM HOLES	12,000	SOFT	5	63642503089
5" SPEED-GRIP	12,000	SOFT	5	63642503088
5" SPEED-GRIP WITH 5 VACUUM HOLES	12,000	SOFT	5	63642503090
5" PSA	12,000	HARD	5	63642503605
5" PSA WITH 5 VACUUM HOLES	12,000	HARD	5	63642503606
5" SPEED-GRIP	12,000	HARD	5	63642503607
5" SPEED-GRIP WITH 5 VACUUM HOLES	12,000	HARD	5	63642503608
6" PSA	10,000	HARD	5	63642503609
6" PSA WITH 6 VACUUM HOLES	10,000	HARD	5	63642503610
6" SPEED-GRIP	10,000	HARD	5	63642503611
6" SPEED-GRIP WITH 6 VACUUM HOLES	10,000	HARD	5	63642503612

POLISHING ADAPTER PAD

Converts your standard Speed-Grip pad into a soft polishing pad. The foam adapter is 3/8" thick and is excellent for fine grits where minimal removal is required. It is ideal for either flat or contour surfaces.



DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
5" SPEED-GRIP	3,786	10	63642503121
5" SPEED-GRIP WITH 5 VACUUM HOLES	3,786	10	63642503122

PALM SANDER WITH WATER RESERVOIR

These pads are designed to be used with 3" and 5" Speed-Grip discs. They utilize a sponge insert to supply the proper amount of water for wet and damp sanding on all surfaces.



DESCRIPTION	STD. PKG.	UPC NO.
3" X 7/8" SPEED-GRIP	10	63642502839
5" X 1-1/4" SPEED-GRIP	10	63642502841

ERGONOMIC PALM SANDERS

Ergonomic palm sanders are uniquely designed to be user-friendly with finger indentations for the operator. They quickly convert a standard 5" or 6" diameter disc into a palm sander for finishing flat surfaces. They are available with either PSA (vinyl) or Speed-Grip (hook and loop) faces.



DESCRIPTION	STD. PKG.	UPC NO.
5" PSA	5	63642503146
5" SPEED-GRIP	5	63642503147
6" PSA	5	63642503148
6" SPEED-GRIP	5	63642503149

NON-PSA GLUE-ON BACK-UP PADS

These pads require the use of manually applied disc adhesive, such as Norton No. 10 Disc Adhesive, to adhere paper discs to the pad. A specially designed fabric surface permits even distribution of the adhesive, excellent holding power and easy disc removal. The pads are precision balanced, with tapered edges, ideal for flat and contoured surfaces.



5" and 6" pads are constructed of epoxy-glass and molded urethane with a 5/16"-24 threaded shank to fit all popular sanders including random orbital and dual action. 8" pads are made of thick molded polyurethane anchored to a plastic hub with a 5/8"-11 female threaded aluminum insert.

DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
5" PAD	10,000	10	63642543400
6" PAD	10,000	10	63642543401
8" PAD, MEDIUM	3,800	5	63642543166
8" PAD, SOFT	3,800	5	63642543165

ACCESSORIES

ADHESIVES FOR NON-PSA DISCS

Available in tube or spray form, these adhesives are specially formulated for holding paper discs to any back-up pad. Waterproof and heat-resistant, No. 10 adhesive is ideal for use on feather-edging operations. For a more permanent bond, apply to both surfaces. Pint can has squeeze spout; quart can has applicator brush.



DESCRIPTION	STD. PKG.	UPC NO.
8 OZ. CAN SPRAY DISC ADHESIVE	6	07660782715
NO. 10 DISC ADHESIVE:		
- 5 OZ. TUBE	12	07660782720
- PINT CAN	12	63642582145
- QUART CAN	12	63642582150

Tech Tips

For best results, allow adhesive to set until tacky before applying disc.

! It is the user's responsibility to refer to and comply with ANSI B7.1

UNIVERSAL ADHESIVE SOLVENT & CLEANER

Designed as a general purpose solvent, adhesive cleaner is ideal for removal of old or excess adhesive spill-over, grease, tar, oil and residual dirt. Transparent and colorless, it is excellent for cleaning applicator guns, aerosol nozzles, brushes and tools, as well as thinning adhesive and sealer products as needed.



DESCRIPTION	STD. PKG.	UPC NO.
QUART CAN	12	07660782780

DISC HAND PADS

Hand pads eliminate finger sanding and are available in three thicknesses: 1", 3/8" and 3/16". The 1" thick pad is composed of two layers, neoprene and polyester foam, for excellent conformability and softness, resulting in fine finishes. Both the 3/8" and 3/16" thick pads are composed of a single layer of neoprene foam. The 3/8" is designed for moderate contours and the 3/16" is designed for maximum flexibility, both producing excellent finishes. Each pad has an elastic hand strap to hold it firmly in place. All are available with either PSA (vinyl face) or Speed-Grip (hook and loop) faces.



DESCRIPTION	STD. PKG.	UPC NO.
5" X 3/16" PSA	10	63642503111
5" X 1" PSA	10	63642502842
5" X 3/16" SPEED-GRIP	10	63642503118
5" X 1" SPEED-GRIP	10	63642503117

HALF MOON HAND PAD

The unique half moon pad uses a standard 5" x 0 Speed-Grip disc folded in half, which adheres to the hooks on the pad face. The straight edge of the pad allows the operator to sand corners, contours, narrow crevices and minute imperfections without over sanding.



DESCRIPTION	STD. PKG.	UPC NO.
5" X 0 SPEED-GRIP	10	63642502768

CLEAR COAT REPAIR HAND SANDING PADS

These finger hand sanding pads are 1-1/4" in diameter and are designed for removal of minor imperfections on clear-coat and paint without leaving finger marks on the workpiece.



DESCRIPTION	STD. PKG.	UPC NO.
1-1/4" PSA	10	63642503145
1-1/4" SPEED-GRIP	10	63642503618

RUBBER WIPER

For removing swarf created when wet sanding.



DESCRIPTION	STD. PKG.	UPC
3" X 2" RUBBER WIPER	50	63642543115

QUICK-SAND BACK-UP PADS

Both the Speed-Grip and PSA Quick-Sand back-up pads have a special TR lock for fast, efficient mounting on random orbital palm Sanders. Best results are achieved when used in conjunction with T402 2000 grit and T402 2500 grit discs.



DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
1-1/4" PSA WITH TR LOCK	7,500	10	63642504292
1-1/4" SPEED-GRIP WITH TR LOCK	7,500	10	63642504291



ORBITAL SANDER

VERTICAL SHAFT GRINDER

WIDE BELTS

A selection of stock products to meet wide belt needs in the woodworking and metalworking industries.

Typical Applications

METALWORKING

- Plate dimensioning
- Slag grinding
- Machining and deburring a variety of materials
- General metalworking applications

WOODWORKING

- Intermediate wide belt sanding
- Abrasive planing and dimensioning of glued-up stock and banded particleboard



BETTER NorZon Plus R824/R823

FEATURES	BENEFITS
• Premium self-sharpening zirconia alumina abrasive	• Aggressive cut and long life
• R824 – Heavy-duty Y-wt polyester backing	• High pressure, dry or wet, heavy-duty metal applications
• R823 – Strong X-wt polyester backing	• Moderate flexibility, dry or wet, fine grit applications

GOOD Metalite R215 Belts

FEATURES	BENEFITS
• Strong X-wt cotton backing	• Aggressive cutting, resistant to heat
• Open coat design	• Value product for wood

SIZE W X L	GRIT	MIN./ STD. PKG.	BETTER		GOOD			
			NORZON PLUS R824†	JOINT/ FLEX	NORZON PLUS R823†	JOINT/ FLEX	METALITE R215	JOINT/ FLEX
25 X 48	80 120	3 / 3 5 / 5			69957344781 69957344776	PLYWELD, RR PLYWELD, RR		
25 X 60	80 120	3 / 3 5 / 5			69957328117 69957328115	PLYWELD, RR PLYWELD, RR		
25 X 75	24 120 150	2 / 2 5 / 5	69957350786	PLYWELD, RR	69957344791 69957344790	PLYWELD, RR PLYWELD, RR		
36 X 75	36 60 80 100 120 150 180	2 / 2 3 / 3 5 / 5	69957350934 69957350931	PLYWELD, RR PLYWELD, RR			69957323872 69957323871	PLYWELD, RR PLYWELD, RR
					69957329014	PLYWELD, RR	69957323870 69957323869	PLYWELD, RR PLYWELD, RR
					69957344869	PLYWELD, RR		
37 X 60	50 80 100 120 150 180 220	3 / 3 5 / 5	69957306219 69957306805	PLYWELD, RR PLYWELD, RR	69957329019 69957328103 69957329018 69957328102 69957328101 69957328100	PLYWELD, RR PLYWELD, RR PLYWELD, RR PLYWELD, RR PLYWELD, RR PLYWELD, RR	69957325709 69957325708 69957325707 69957302955 69957305718	PLYWELD, RR PLYWELD, RR PLYWELD, RR PLYWELD, RR PLYWELD, RR PLYWELD, RR
37 X 75	36 50 80 100 120 150 180	2 / 2 3 / 3 5 / 5	69957350959 69957305107 69957350955	PLYWELD, RR PLYWELD, RR PLYWELD, RR			69957325957 69957323880	PLYWELD, RR PLYWELD, RR
					69957307358	PLYWELD, RR	69957325760 69957305737	PLYWELD, RR PLYWELD, RR
					69957306734	PLYWELD, RR		

REFER TO PAGE 80 FOR JOINT AND FLEX DESCRIPTIONS

† WATERPROOF

SpecCheck



STARTING RECOMMENDATIONS

APPLICATIONS	COAT DESIGN	HEAVY PRESSURE	MODERATE PRESSURE
Metalworking	Close	NorZon Plus R824	NorZon Plus R823
Woodworking	Open	R215	Metalite R215

RECOMMENDED GRIT SELECTION

ROUGH/HEAVY-DUTY	INTERMEDIATE	FINISHING/POLISHING
24-50	60-100	120-220

JOINTS

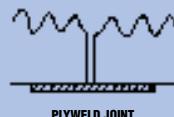
CD – conventional butt joint specifically for portable belts – straight cut with tape

CRG – Roll Grinding Joint – special platen and roll grinding butt joint

Norlok Joint – The two ends of the abrasive material are cut in an interlocking configuration that, when jointed with a thinner patch material, offers resistance to hinging and joint fatigue. The special configuration permits this joint to more closely conform to contact wheels, workpiece shapes, and other difficult applications.

PG – Precision Grinding Joint – a butt joint, joined with flexible tape for contour grinding.

BT / Plyweld Joint – a conventional butt joined with an extra strong patch to eliminate joint breakage. Often used for demanding operations with coarse grit belts.



PLYWELD JOINT



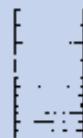
NORLOK JOINT

FLEXES

C – Cross Flex – Flex lines are at a 45° angle to the edge of the belt, making a series of diamond shaped lines.

D – Double Flex – The bond is broken at two 45° angles (to the length). This flex is desirable for sanding shapes and contours, such as moldings. It is standard on most J-weight products.

L – Linear Flex – The bond is broken in the direction of the length, providing good product conformability with long life.



SINGLE FLEX

S – Single Flex – The bond is broken at a 90° angle to the length, creating flex lines that are perpendicular to the edge of the belt. The abrasive is stiffer in one direction and flexible in the other. Single Flex is standard on most X-weight products.



C FLEX

RR – Rubber Roll Flex – Flex lines are perpendicular (90° angle) to the edge of the belt (creating a horizontal line pattern) providing flexibility in the lengthwise direction

COMPETITIVE CROSS REFERENCE - WIDE BELTS

NORTON	3M	HERMES	KLINGSPOR	SIA	VSM
R823	561F Y, 551E XE 741A, 741E, 761D	RB486 X, RB346-23MX RB426-23MX, RB484TY RB486XF	CS411Y		KK715X
R824	561D, 561F, 563F 741A, 741E, 761D 761F	RB484TY, RB486Y RB346-23MX, RB426-23MX RB480-21MX, CB440Y RB486XY	CS411Y	2800, 2803 2929	KK716Y ZK713X
R215	270D, 270DZ, 272DZ 260D, 362RZ	RB316 XOP RB316-34XOP	CS413Y CS311X	2928, 2920 C903D	KK504X KK524X

TechTips

- 36" wide belts can be used on machines that normally use 37" wide belts.
- Closed coat belts are used on harder materials where loading is not a problem.



It is the user's responsibility to refer to and comply with ANSI B7.1

ROLLS

ROLLS

Coated abrasive rolls are designed for fast and easy sanding of various surfaces, and can be torn to exact lengths as needed. Handy rolls are packaged in a protective, convenient dispenser which eliminates costly waste and permits neat, easy storage.

Typical Applications

CLOTH ROLLS

- Polishing lathe turnings, rolls and cylinders
- Light deburring
- Blending machine tool marks
- Removing rust and scale
- Fine sanding and polishing

PAPER ROLLS

- Preparing primed and painted surfaces
- Sanding plastic and fiberglass
- Bare wood sanding
- Ideal for hand/portable sanders



BEST No-Fil Norton SG A975 PSA Paper Rolls – Longest life



FEATURES	BENEFITS
• Patented Norton SG ceramic aluminum oxide abrasive, P-graded	• Fastest cut rate; longest life • Consistent finish
• Unique fibre-reinforced, B-wt latex-saturated backing	• 50-60% improvement in tear strength • Flexible; can be used wet
• Water-based stearate, non-pigmented, No-Fil coating	• Provides maximum load resistance and extended life; no color transfer to work
• PSA coated backing	• Easy mounting and removal



BETTER No-Fil Champagne A275 PSA Paper Rolls

FEATURES	BENEFITS
• Premium P-graded, heat-treated aluminum oxide abrasive	• Superior life; consistent finish
• High strength B-wt latex backing	• Superior strength, reduced edge-wear
• Non-pigmented stearate (No-Fil), open coat	• Reduces loading, no color transfer to work surface
• PSA coated backing	• Easy mounting and removal



GOOD Metalite K225 Cloth Rolls – For general purpose metalworking applications

FEATURES	BENEFITS
• Premium P-graded aluminum oxide abrasive	• Greater cut rate than competitive products
• Flexible J-wt backing	• Superior conformability to complex surfaces
• Advanced full resin bond system	• Exceptional grain adhesion for longer life





HAND SANDING

JITTERBUG SANDER

GOOD Lightning Metalite K227 Cloth Rolls – The choice for quality metal finishing

FEATURES	BENEFITS
• Flexible J-wt backing	• Superior conformity to complex surfaces
• Mild acting bond system	• Produces fine finishes on all shapes

GOOD Emery A621 Paper Rolls – The choice for dry metal polishing and lapping

FEATURES	BENEFITS
• Highest quality natural emery abrasive	• Produces extra fine finishes, no scratching

GOOD Crocus K624 Cloth Rolls – Ideal for extra fine hand polishing

FEATURES	BENEFITS
• Ferrous oxide abrasive	• Best for polishing soft, non-steel and precious metals

GOOD Screen-Bak Durite Q421 Rolls – Cleanable, ideal for drywall applications

FEATURES	BENEFITS
• Open mesh backing	• Extreme resistance to loading when removing scale, rust and corrosion

HANDY ROLLS AND OTHER ROLLS

All rolls measured in inches x yards.

GRIT	MIN./STD. PKG.	GOOD											
		K225*	K225*	K225*	K225*	K225*	K227*	K227*	K227*	K624	K624	Q421†	A621
		1" X 10	1" X 50	1-1/2" X 50	2" X 50	4" X 50	1" X 50	1-1/2" X 50	2" X 50	1" X 50	2" X 25	1-1/2" X 25	2" X 25
UPC NO. (PREFIX 662611)													
50	1/5		27728*	27730*	27732*								
60			27729*	27731*	27733*								
80		34298	26276	26288	26299		09180	09255	09335			07275**	
100		34299	26275	26287	26298		09170	09245	09325			07270**	49811**
120		34300	26274	26286	26297	27285	09160	09235	09315			07265**	
150		34301	26273	26285	26296		09150	09225	09305				
180		34302	26272	26284	26295		09140	09215	09295				
220			26271	26283	26294								
240		34303	26270	26282	26293								
280		34304	26269	26281	26292								
320			26268	26280	26291								
400			26267	26279	26290								
600			26266	26278	26289								
GRIT 0	1/6											49800	
CROCUS	1/10									49805	49810		

* P-GRADED, K227 IS P-GRADED <= 180 GRIT

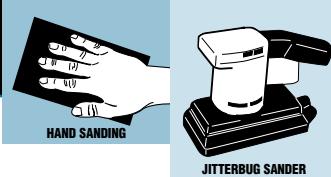
† WATERPROOF

* SUPPLIES IN METALITE K224 - P-GRADED

** PACKAGING STANDARDS: MIN. QTY./STD. PKG.
Q421: 1/10



PSA (PRESSURE SENSITIVE ADHESIVE) ROLLS



GRIT	MIN./STD. PKG.	BEST						
		A975* 2-3/4" X 25 YDS.	A975* 2-3/4" X 30 YDS.	A975* 2-3/4" X 45 YDS.	A275* 2-3/4" X 25 YDS.	A275* 2-3/4" X 30 YDS.	A275* 2-3/4" X 45 YDS.	A275* 4-1/2" X 10 YDS.
80	1/5	66261149566			66261131691			66261131697
100			66261149565			66261131690		66261131696
120			66261149564			66261131689		66261131695
150				66261149563			66261131688	66261131694
180				66261149562			66261131687	66261131693
220				66261149561			66261131686	66261131692
240							66261131685	
320							66261131683	
400							66261131681	

* P-GRADED

PSA ROLL DISPENSER

Designed to accommodate two 2-3/4" PSA rolls, this heavy-duty wire dispenser has a vinyl coating to protect the work surface. They are stackable for multi-grit operations, or can be attached to a wall or mounted on a cabinet.



DESCRIPTION	STD. PKG.	UPC NO.
PSA ROLL DISPENSER	1	63642542773

FASTTRACK ROLLS

Norton offers FastTrack delivery on your customized, made-to-order R228 and K225 fifty-yard rolls. Contact your local distributor or Norton sales representative for details.

Description

- Width: 2" - 12"
- Length: 50 yards
- Leadtime: 5 days
- Aluminum Oxide Cloth, R228, K225

Ordering

- Include a full description of roll required, including:
 - quantity
 - size
 - specification
 - grit size

FastTrack Roll Quantity Availability

Width	Minimum Qty.	Maximum Qty.
2" to <3"	6 Rolls	12
3" to <4"	4 Rolls	8
4" to <5"	3 Rolls	6
5" through 6"	2 Rolls	4
>6" through 12"	1 Roll	2

HAND SANDING BLOCK



Rectangular sanding block for hand sanding with PSA rolls.



DESCRIPTION	STD. PKG.	UPC NO.
2-3/4" X 5-1/2"	10	63642503159

TechTips

- Use light machine oil with cloth rolls as a lubricant for finer finishes and quicker cut.

! It is the user's responsibility to refer to and comply with ANSI B7.1



SpecCheck

APPLICATION INFORMATION

FAST CUT GENERAL FINISH	SLOW CUT FINE FINISH	MINIMUM CUT SUPER FINE FINISH
Metalite K225	Emery A621	Crocus K624

BEAR-TEX SURFACE FINISHING PRODUCTS

Bear-Tex Surface Finishing products are made of a non-woven nylon web impregnated with abrasive grain and resin. A variety of abrasives, grit sizes and backing materials give the user an extensive and superior product offering.

Typical Applications

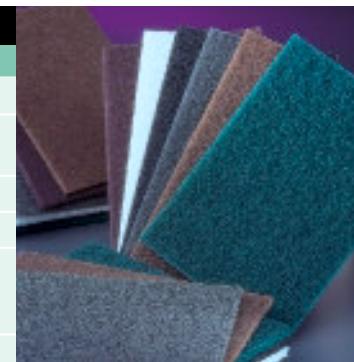
- Light to heavy duty cleaning
- Deburring
- Blending
- Polishing
- Finishing



BEAR-TEX HAND PADS

GOOD Bear-Tex Hand Pads and Rolls

FEATURES	BENEFITS
• Flexible	• Conform to work surface
• Gentle action	• Easily removes flashing or burrs without affecting dimension of workpiece
• Non-loading	• Constant supply of new cutting edges
• Non-rusting	• No workpiece contamination
• Resilient construction	• Long life, increased productivity • Solvent resistant • Waterproof
• Easily cut to desired size	• Reduces waste



GOOD

SIZE W X L	COLOR	NAME	ABRASIVE	GRIT SIZE	STD. PKG.	PRODUCT NO.	UPC NO.
6 X 9	WHITE	LIGHT DUTY CLEANING PAD	NON-ABRASIVE		60	456	66261045600
6 X 9	GRAY	CLEAN & FINISH PAD	SILICON CARBIDE	ULTRA FINE	60	635	66261063500
6 X 9	DARK TAN	HEAVY DUTY PAD	ALUMINUM OXIDE	MEDIUM	40	740	66261074000
6 X 9	GRAY	METAL BLEND PAD	SILICON CARBIDE	MEDIUM	40	746	66261074600
6 X 9	MAROON	GENERAL PURPOSE PAD	ALUMINUM OXIDE	VERY FINE	60	747	66261074700
6 X 9	GRAY	FINAL SHINE PAD	SILICON CARBIDE	MICRO FINE	60	748	66261074800
6 X 9	MAROON	LONG LIFE PAD	ALUMINUM OXIDE	VERY FINE	60	777	66261077700
6 X 9	GREEN	SCOURING PAD	ALUMINUM OXIDE	VERY FINE	60	796	66261079600
6 X 9	GRAY	GENERAL PURPOSE PAD	SILICON CARBIDE	VERY FINE	40	851	66261085100
3-1/4 X 5-1/2					10	HAND PAD HOLDER	66261047583

TechTips



■ Bear-Tex products are non-metallic, won't rust and are an ideal replacement for steel wool.



It is the user's responsibility to refer to and comply with ANSI B7.1



HAND SANDING

BEAR-TEX HAND PADS

SpecCheck

STARTING RECOMMENDATIONS

MORE AGGRESSIVE, ROUGHER FINISH				LESS AGGRESSIVE, FINER FINISH				
#740 (DARK TAN) HEAVY DUTY PAD	#746 (GRAY) METAL BLEND PAD	#777 (MAROON) LONG LIFE PAD	#747 (MAROON) GENERAL PURPOSE PAD	#796 (GREEN) SCOURING PAD	#851 (GRAY) GENERAL PURPOSE PAD	#635 (GRAY) CLEAN & FINISH PAD	#748 (GRAY) FINAL SHINE PAD	#456 (WHITE) LIGHT DUTY CLEANING PAD
<ul style="list-style-type: none"> • Removing rust and oxidation • Deburring • Blending • Replaces steel wool and wire brushes in many applications 	<ul style="list-style-type: none"> • Cleaning - aluminum - around welds - glass molds - dies • Light deburring of intricate parts 	<ul style="list-style-type: none"> Fast initial cut rate • Cleaning • Deburring • Corrosion removal • Oxidation removal 	<ul style="list-style-type: none"> • Cleaning • Finishing • Deburring machinery & tools • Rust removal • Defuzzing wood • Preparing surfaces for painting 	<ul style="list-style-type: none"> • Removing stains • Blending around welds • Rust • Corrosion • Oxidation 	<ul style="list-style-type: none"> • Removing rust and oxidation • Blending glass partitions • Cleaning glass molds • Satin finishing aluminum parts 	<ul style="list-style-type: none"> • Deburring plastic surfaces • Cleaning fiber-glass partitions • Blending paint • Scuffing acrylic surfaces • Finishing aluminum doors and windows 	<ul style="list-style-type: none"> • Light cleaning - steel - non-steel • Defuzzing wood • Final rub 	<ul style="list-style-type: none"> Non-abrasive • Cleaning glass, fiberglass and porcelain fixtures • Wood highlighting and rubbing between finish coats • Scratch-free cleaning of stainless steel, chrome, copper and ceramic • Use with liquid detergents

BEAR-TEX SPONGE PADS

Bear-Tex material is laminated to a top quality, long-lasting sponge for the convenience of 2 pads in one.

GOOD							
SIZE W X L X T	COLOR	NAME	ABRASIVE	GRIT SIZE	STD. PKG.	PRODUCT NO.	UPC NO.
3-1/4 X 6-1/4 X 3/4	GREEN/YELLOW	SCOUR-N-SPONGE PAD	ALUMINUM OXIDE	VERY FINE	40	893	66261059403
3-1/4 X 6-1/4 X 3/4	WHITE/YELLOW	CLEAN-N-SPONGE PAD	NON-ABRASIVE	NON-ABRASIVE	40	875	66261059402

BEAR-TEX ABRASIVE BRUSHES

Tough, flexible nylon filaments embedded with abrasive grain form the bristles of these brushes. Use Bear-Tex abrasive brushes where maximum conformability is needed.



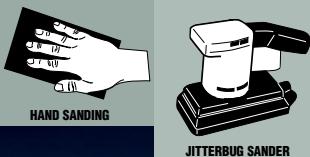
GOOD				
SIZE D X R X H*	ABRASIVE	GRIT	MAX. RPM	STD. PKG.
7 X 1 X 7/8	SILICON CARBIDE SILICON CARBIDE	80 120	6,000	5
				UPC NO. 66261058830 66261058834

*DIAMETER X RIM WIDTH X HOLE

AIR-COOLED RUBBER BACK-UP PAD AND RETAINER NUT FOR ABRASIVE BRUSHES

DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
7" MEDIUM PAD	7,000	5	63642543422
#103 RETAINER NUT	—	10	63642543463

BEAR-TEX SURFACE FINISHING PRODUCTS



BEAR-TEX ROLLS

Rolls may be cut for use in jitterbug sanding or on hand sanding applications. Rolls have the durability for indexing machine applications.

Typical Applications

- Light deburring
- Cleaning
- Finishing
- Applying decorative finishes



BEST Bear-Tex High Strength Rolls – For light deburring and finishing

FEATURES	BENEFITS
<ul style="list-style-type: none"> • Premium aluminum oxide grain • Firm, durable web; strong resin binders • Smear-proof 	<ul style="list-style-type: none"> • Clean cutting and long lasting • High resistance to tearing on burrs and sharp edges • Produces light satin finishes

BETTER Bear-Tex Fast Cut Rolls – Fast initial cut, flexible

FEATURES	BENEFITS
<ul style="list-style-type: none"> • Premium aluminum oxide grain • Fast initial cut • Conformable 	<ul style="list-style-type: none"> • Clean cutting and long lasting • Less pressure needed • Able to get into intricate shapes and follow contours, user-friendly

BETTER Bear-Tex Clean & Blend Rolls – For general purpose use

FEATURES	BENEFITS
<ul style="list-style-type: none"> • High quality aluminum oxide or silicon carbide grain • Uniform web construction • Can be cut to exact sizes needed 	<ul style="list-style-type: none"> • Long product life • Controlled aggressiveness • Economical; minimal waste

SIZE (W X L)	COLOR	NAME	ABRASIVE	GRIT	STD. PKG.	BEST	BETTER
						UPC NO.	UPC NO.
4" X 30 FT.	TAN	FAST CUT	A/O	MEDIUM	3	66261006373	66261010081
	MAROON	CLEAN & BLEND	A/O	FINE	4		66261058364
	MAROON	CLEAN & BLEND	A/O	VERY FINE	4		66261058361
	GREEN	FAST CUT / GREEN	A/O	VERY FINE	5		66261002023
	MAROON	FAST CUT / MAROON	A/O	VERY FINE	4		66261051701
	MAROON	HIGH STRENGTH	A/O	VERY FINE	4		66261058360
	GRAY	CLEAN & BLEND	S/C	VERY FINE	4		66261058357
	GRAY	CLEAN & BLEND	S/C	ULTRA FINE	5		66261058355
	GRAY	CLEAN & BLEND	S/C	MICRO FINE	5		66261052235
	WHITE	T- POLISHING	NONE	NON-ABRASIVE	3		
6" X 30 FT.	MAROON	HIGH STRENGTH	A/O	MEDIUM	2	66261005182	66261058376
	MAROON	CLEAN & BLEND	A/O	VERY FINE	3	66261004281	
	MAROON	HIGH STRENGTH	A/O	VERY FINE	2		
	GRAY	CLEAN & BLEND	S/C	VERY FINE	3		

BEAR-TEX SURFACE FINISHING PRODUCTS

BEAR-TEX ROLL ASSORTMENT

Bear-Tex rolls may be cut for use in jitterbug sanding or on hand sanding applications. This convenient dispenser box contains three 2 inch wide x 15 foot long rolls. Each roll is a different grit.

SIZE W X L	ABRASIVE	GRIT	BETTER	
			STD. PKG.	UPC NO.
THREE ROLLS 2" X 15 FT. (ONE OF EACH SPECIFICATION)	ALUMINUM OXIDE ALUMINUM OXIDE SILICON CARBIDE	FINE VERY FINE MICRO FINE	1	66261008108

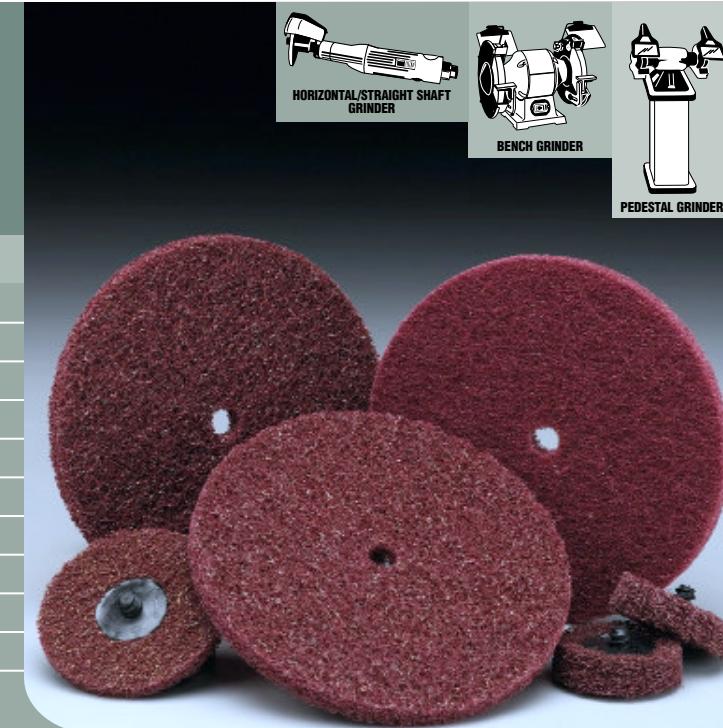


BEAR-TEX HIGH STRENGTH DISCS

Made of non-woven nylon web impregnated with abrasive grain and resin for use in a variety of deburring and finishing applications.

Typical Applications

- Rust/oxide or coating removal
- Pipe ID and OD polishing
- Casting cleaning
- Highlighting (antiquing)
- Contaminant removal
- Removal of handling marks
- Gasket removal
- Cleaning and blending of surface imperfections
- Prepping prior to soldering
- Removal of filling materials
- Cleaning angles and odd shapes

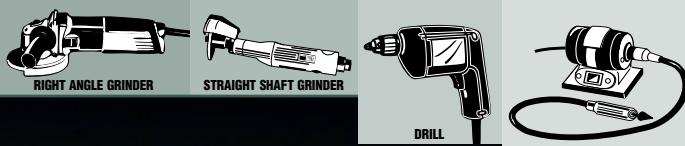


BEST	Bear-Tex High Strength Discs – For light deburring and finishing	EXPANDED OFFERING
FEATURES	BENEFITS	
<ul style="list-style-type: none"> • Premium aluminum oxide grain • Firm, durable web • Tough, yet conformable • Strong resin binders • Smear-proof • New 2" and 3" with Speed-Lok TR fastener 	<ul style="list-style-type: none"> • Clean cutting and long lasting • High resistance to tearing on burrs and sharp edges • Can be “ganged” together and used as a wheel • Highly smear-resistant • Produces light satin finishes • Quick, tool-free disc changes allow for more grinding time 	

SIZE D X H	ABRASIVE	MAX. RPM	BEST	
			STD. PKG.	UPC NO.
2" SPEED-LOK TR	A/O MEDIUM HIGH STRENGTH	12,000	160	66261014792
3" SPEED-LOK TR	A/O MEDIUM HIGH STRENGTH	12,000	80	66261014793
6 X 1/4	A/O VERY FINE HIGH STRENGTH	4,000	70	66261007628
6 X 1/2	A/O MEDIUM HIGH STRENGTH A/O VERY FINE HIGH STRENGTH	4,000	70	66261005073 66261004980
8 X 1/2	A/O MEDIUM HIGH STRENGTH A/O VERY FINE HIGH STRENGTH	3,000	50	66261005491 66261004506

See “Mandrel Assemblies” on page 105 when using these discs on edge.

BEAR-TEX SURFACE FINISHING



BEAR-TEX RAPID STRIP DISCS AND DEPRESSED CENTER WHEELS

An open web of thick, strong synthetic fibers and extra coarse abrasive, bonded together by a smear-resistant adhesive allowing cleaning and conditioning of a multitude of materials, quickly and easily with little loading.

Typical Applications

- Removal of surface rust and residue, corrosion, light weld splatter, dirt, mill scale and other similar surface contaminants
- Paint and epoxy coating removal
- Surface prep before coatings are applied
- Surface prep before welding
- Cleaning and conditioning after welding



BEST	Bear-Tex Rapid Strip Discs and Depressed Center Wheels	EXPANDED OFFERING
FEATURES		BENEFITS
• Open web construction		• Minimizes loading
• Conformable		• Follow difficult part profiles
• Extra coarse grit		• Easy cleaning of uneven surfaces
• Used with portable tools		• Quick cleaning and conditioning of surfaces
• New 2" and 3" discs with Speed-Loc TR fastener		• Easy and safe to use especially in difficult to reach areas
• New 4" - 8" Hook & Loop discs		• Quick, tool-free disc changes allow for more grinding time
		• Quick replacement; easy on and off
		• Disc stays securely on holder

SIZE D X H	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	BEST UPC NO.
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BEAR-TEX RAPID STRIP DISCS

2" SPEED-LOK TR	SILICON CARBIDE	EXTRA COARSE	15,500	10	66261013402
3" SPEED-LOK TR	SILICON CARBIDE	EXTRA COARSE	12,000	10	66261013403
4 X 1/4	SILICON CARBIDE	EXTRA COARSE	8,000	25	66261008008
4 X 3/8	SILICON CARBIDE	EXTRA COARSE	8,000	25	66261008049
4 X 1/2	SILICON CARBIDE	EXTRA COARSE	8,000	25	66261007916
6 X 1/4	SILICON CARBIDE	EXTRA COARSE	5,500	15	66261008136
6 X 1/2	SILICON CARBIDE	EXTRA COARSE	5,500	15	66261008051

BEAR-TEX RAPID STRIP HOOK & LOOP DISCS

4" BLANK	SILICON CARBIDE	EXTRA COARSE	13,000	40	66261014870
4-1/2 BLANK	SILICON CARBIDE	EXTRA COARSE	12,000	40	66261014871
5" BLANK	SILICON CARBIDE	EXTRA COARSE	10,000	40	66261014872
6" BLANK	SILICON CARBIDE	EXTRA COARSE	8,500	40	66261014873
7" BLANK	SILICON CARBIDE	EXTRA COARSE	6,000	20	66261014874
8" BLANK	SILICON CARBIDE	EXTRA COARSE	4,500	20	66261014875

BEAR-TEX RAPID STRIP DEPRESSED CENTER WHEELS

4-1/2 X 7/8	SILICON CARBIDE	EXTRA COARSE	10,500	10	66261009649
4-1/2 X 5/8-11	SILICON CARBIDE	EXTRA COARSE	10,500	10	66261009585
7 X 7/8	SILICON CARBIDE	EXTRA COARSE	6,600	10	66261009586
7 X 5/8-11	SILICON CARBIDE	EXTRA COARSE	6,600	10	66261009650

BEAR-TEX SURFACE FINISHING PRODUCTS

MANDREL ASSEMBLIES FOR RAPID STRIP DISCS AND DISCS-ON-EDGE

FITS HOLE	FOR DISC WIDTH	FOR DISC DIAMETER	SHANK DIAMETER	OVERALL LENGTH	WASHER DIAMETER	STD. PKG.	UPC NO.
1/4"	1/2" (STANDARD)	UP TO 6"	1/4"	2-1/2"	1-1/2"	1	66261009502
1/2"	1/2" (STANDARD)	UP TO 8"	1/4"	3-1/8"	2-1/4"	1	66261059420

AVOS EDGER SPEED-LOK BEAR-TEX DISCS

Made of non-woven nylon web impregnated with abrasive grain and resin for use in a variety of applications. Choose one of three grit specifications to achieve the best results for your application.

Typical Applications

- Light deburring
- Cleaning and rust removal
- Finishing, polishing and paint preparation



RIGHT ANGLE GRINDER



BETTER AVOS – Allows View Of Surface – Edger Speed-Lok Bear-Tex Discs

FEATURES	BENEFITS
• Patented hole design	• Allows interrupted cut which reduces heat up to 30% over standard round discs • Cool cutting results in longer disc life • Provides complete vision into the grinding zone • Operators can grind more accurately with less re-work
• Scooped holes	• Create air flow to pull loose abrasive and swarf away from work surface grinding zone - resulting in extended disc life
• 5 degree angle back-up pad	• Grinding at 5°-15° angle allows greater utilization of disc surface • Eliminates gouging of workpiece
• Coarse removes 60 – 120 grit	• For light deburring grindlines
• Medium removes 120 – 180 grit	• For cleaning and rust removal
• Very Fine removes 180 – 320 grit	• For finishing, polishing and paint preparation



See page 52 for AVOS back-up pads.

SIZE	GRIT	STD. PKG.	BETTER	
			UPC NO.	
AVOS EDGER SPEED-LOK BEAR-TEX DISCS				
4-1/2 EDGER SPEED-LOK	A/O COARSE A/O MEDIUM A/O VERY FINE	40	66261010447 66261010448 66261010449	
5 EDGER SPEED-LOK	A/O COARSE A/O MEDIUM A/O VERY FINE	40	66261009427 66261009428 66261009429	
7 EDGER SPEED-LOK	A/O COARSE A/O MEDIUM A/O VERY FINE	40	66261009430 66261009431 66261009432	

Coming 1st Quarter 2003:
New Round Edger Shape!

BEAR-TEX SURFACE FINISHING PRODUCTS

BEAR-TEX SCF DISCS & SCF/STE BELTS

For use on a variety of electric and air powered tools to deburr, clean, blend and finish.

Typical Applications

- Removing surface defects
- Removing light edge burrs, parting lines or flashing
- Removing rust, oxides, corrosion, paints and scale
- Cleaning molds
- Blending mill marks, tool marks or uneven edges



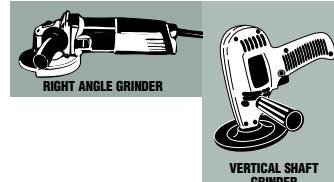
BETTER Bear-Tex Surface Blending Discs & Belts

EXPANDED OFFERING

FEATURES	BENEFITS
• Flexible and conformable	• Conform easily to workpiece
• Tough, reinforced nylon web	• Eliminates edge fraying and grain shedding
• Uniform, thorough abrasive coating	• Consistent finish
• Open construction	• Resists loading
• Three color-coded grit sizes available	• Easy identification and matching of product with application or finish requirement
• Discs – Hook and Loop and Speed-Lok locking systems	• Quick replacement, easy on and off
• New STE Low Stretch belts	• Disc stays securely on holder
	• Non-stretching during use of longer length belts

SIZE	ABRASIVE	STD. PKG.	BETTER		
			COARSE (BROWN)	MEDIUM (MAROON)	VERY FINE (BLUE)
BEAR-TEX SURFACE BLENDING SCF DISCS (WITH HOOK AND LOOP FASTENING SYSTEM)					

2" BLANK	A/O	80	66261004431	66261004441	66261004451
3" BLANK	A/O	60	66261004432	66261004442	66261004452
4" BLANK	A/O	40	66261004433	66261004443	66261004453
4-1/2" BLANK	A/O	40	66261004434	66261004444	66261004454
5" BLANK	A/O	40	66261004435	66261004445	66261004455
6" BLANK	A/O	30	66261006910	66261006911	66261006912
7" BLANK	A/O	25	66261004436	66261004446	66261004456
8" BLANK	A/O	20	66261006913	66261006914	66261006915



WITH SPEED-LOK TS FASTENING SYSTEM (FITS NORTON TS AND STANDARD ABRASIVES QUICK CHANGE BACK-UP PADS)					
2" SPEED-LOK TS	A/O	50	66261004439	66261004449	66261004459
3" SPEED-LOK TS	A/O	25	66261004440	66261004450	66261004460
4" SPEED-LOK TS	A/O	25	66261055349	66261055350	66261055351

WITH SPEED-LOK TR FASTENING SYSTEM (FITS NORTON TR AND 3M ROLOC BACK-UP PADS)					
2" SPEED-LOK TR	A/O	50	66261004437	66261004447	66261004457
3" SPEED-LOK TR	A/O	25	66261004438	66261004448	66261004458
4" SPEED-LOK TR	A/O	25	66261008822	66261008821	66261008820

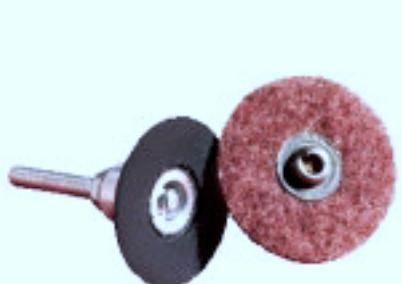
BEAR-TEX SURFACE FINISHING PRODUCTS

BEAR-TEX SCF DISCS

SCF DISC ATTACHMENT SYSTEMS



SURFACE BLENDING SCF DISCS FEATURE A HOOK & LOOP FASTENING SYSTEM.



SPEED-LOK TS SURFACE BLENDING SCF DISCS ARE COMPATIBLE WITH THE NORTON SPEED-LOK TS AND STANDARD ABRASIVES QUICK CHANGE FASTENING SYSTEMS.



SPEED-LOK TR SURFACE BLENDING SCF DISCS ARE COMPATIBLE WITH THE NORTON SPEED-LOK TR AND 3M ROLOC FASTENING SYSTEMS.

PAD DIAMETER	SPINDLE OR HOLE SIZE	MAX. RPM	3M EQUIVALENT	STD. PKG.	UPC NO.
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BACK-UP PADS FOR HOOK & LOOP SURFACE BLENDING SCF DISCS

1-1/2	1/4 STEEL SHANK	25,000	9215	5	66261059350
2	1/4 STEEL SHANK	23,000	922	5	66261059352
3	1/4 STEEL SHANK	20,000	923	5	66261059354
4	1/4 STEEL SHANK 1/2-13 5/8-11 M10 X 1.250 M14	18,000 13,000	924 914 914 914	5	66261059356 66261059303 66261059304 66261059305 66261059307
4-1/2	5/8-11	10,000	9145	5	66261006948
5	5/16-24 MALE 3/8-24 MALE 1/2-13 5/8-11	10,000	905 905 915 915	5	66261059360 66261059308 66261059309 66261059310
6	5/16-24 MALE* 5/8-11	10,000 8,000	906 916	5	66261059364 66261059312
7	5/8-11	6,000	917	5	66261059368
8	5/8-11	4,500	918	5	66261059372

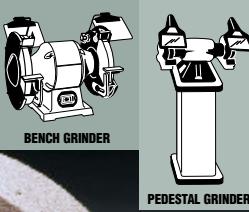
*FOR RANDOM ORBITAL SANDERS ONLY.



PAD DIAMETER	DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
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BACK-UP PADS FOR SPEED-LOK SURFACE BLENDING SCF DISCS

2	HARD SPEED-LOK TS BACK-UP PAD MEDIUM SPEED-LOK TS BACK-UP PAD MEDIUM SPEED-LOK TR BACK-UP PAD	30,000 25,000 25,000	10 10 10	63642543205 63642543210 66261055103
3	HARD SPEED-LOK TS BACK-UP PAD MEDIUM SPEED-LOK TS BACK-UP PAD HARD SPEED-LOK TR BACK-UP PAD MEDIUM SPEED-LOK TR BACK-UP PAD	20,000 20,000 20,000 20,000	10 10 10 10	63642543220 63642543225 63642804900 66261055105
4	MEDIUM SPEED-LOK TS BACK-UP PAD HARD SPEED-LOK TR BACK-UP PAD MEDIUM SPEED-LOK TR BACK-UP PAD	12,000 12,000 12,000	10 10 10	66261043232 63642502912 66261047581



BEAR-TEX POLYBOND WHEELS

Polybond wheels are manufactured by bonding abrasive grain into a foamed polyurethane matrix, similar to bonded grinding wheels, yet flexible and conformable.

Typical Applications

METAL CONDITIONING WHEELS

- Heavy duty deburring applications
- High surface temperature applications
- Replacing wire brushes
- Finishing applications

WOOD FINISHING WHEELS

- Wood mold profile sanding



SIZE D X T X H	SPECIFICATION	MAX. RPM	STD. PKG.	BETTER UPC NO.
BEAR-TEX POLYBOND METAL CONDITIONING WHEELS				
6 X 1/2 X 1-1/4	C150-H10BTM	3,600	8	66261010696
6 X 1 X 1-1/4	A40-H10BTM	3,600	4	66261006117
6 X 1 X 1-1/4	A40-J10BTM	3,600	4	66261010697
6 X 1 X 1-1/4	C80-F7BTM	3,600	4	66261010698
6 X 1 X 1-1/4	C240-D4BTM	2,200	4	66261010695

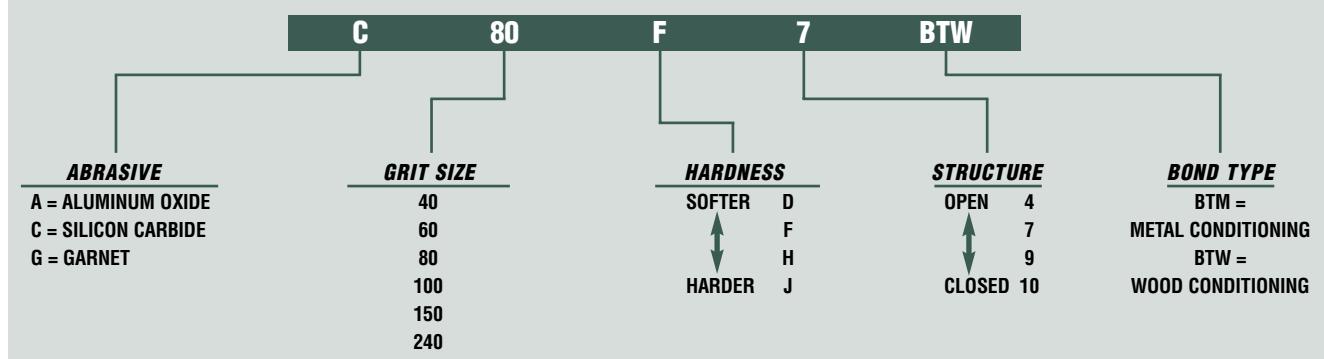


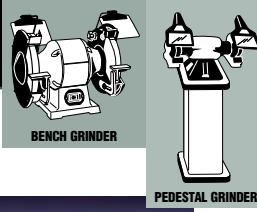
SpecCheck

STARTING RECOMMENDATIONS FOR BEAR-TEX POLYBOND METAL CONDITIONING WHEELS

All purpose finishing and polishing	C240-D4BTM
General deburring - nonferrous materials	C80-F7BTM
General deburring - nonferrous and coarse finishing	A40-H10BTM
General deburring and finishing	C150-H10BTM
Saw blade finishing	A40-J10BTM

Polybond Product Identification System





BEAR-TEX POLYBOND WHEELS (CONTINUED)

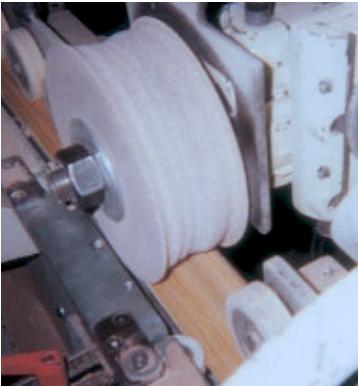
SIZE <i>D X T X H</i>	SPECIFICATION	MAX. RPM	STD. PKG.	BETTER	
					UPC NO.
BEAR-TEX POLYBOND WOOD FINISHING WHEELS					
6 X 2 X 1-1/4	G60-H9BTW C80-F7BTW	3,600	2	66261003833 66261009750	
8 X 2 X 1-1/4	G60-H9BTW C80-F7BTW G100-D7BTW	2,600	2	66261004253 66261004579 66261009846	



Polybond polyurethane foam wood finishing wheels provide the ideal balance between long life and profile edge holding ability—matched with fast cut rates and uncompromised finishing capability.

STD. PKG.	UPC NO.
1 KIT	66261055352

BEAR-TEX POLYBOND WOOD FINISHING WHEEL SHAPING KIT

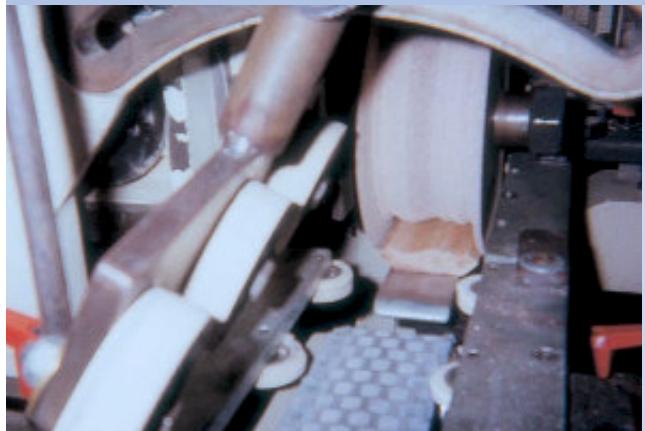


Contains aluminum oxide PSA-backed abrasive sheet and instructions to dress final shapes into wheels.

SpecCheck

BEAR-TEX POLYBOND WOOD FINISHING WHEEL SPEED RECOMMENDATION CHART

WHEEL DIAMETER	SOFT MAPLE, POPLAR, MAHOGANY, PINE, GUM SUGGESTED SFPM: 1500 - 2000	OAK, WALNUT, ROCK MAPLE, PECAN, CHERRY SUGGESTED SFPM: 900 - 1400	SYNTHETIC BOARD PRODUCTS SUGGESTED SFPM: 2000 - 2500
6"	900 - 1250 RPM	550 - 850 RPM	1300 - 1600 RPM
8"	650 - 900 RPM	400 - 600 RPM	950 - 1200 RPM



STARTING RECOMMENDATIONS

APPLICATION	SPEC
Intermediate sanding of solid woods	G60-H9BTW
Finish sanding of solid woods	C60-H9BTW
Finish sanding of synthetic board products	C80-F7BTW
Sealer sanding	G100-D7BTW

BEAR-TEX SURFACE FINISHING PRODUCTS

SpecCheck

BEAR-TEX CROSS REFERENCE CHARTS

BEAR-TEX HAND PADS

NORTON (BEAR-TEX)	3M (SCOTCH-BRITE)	STANDARD ABRASIVES (BRITE-RITE)
456 Light Duty Cleaning Pad (White)	7445 (White)	Brite-Rite Cleaning
635 Clean & Finish Pad (Gray)	6448 (Brown)	
740 Heavy Duty Pad (Brown)	7440 (Tan)	Brite-Rite Heavy Duty
746 Metal Blend Pad (Gray)	7446 (Gray)	
747 General Purpose Pad (Maroon)	7447 (Maroon)	Brite-Rite General Purpose
748 Final Shine Pad (Gray)	7448 (Gray)	Brite-Rite Ultra-Fine S/C
777 Long Life Pad (Maroon)		
796 Scouring Pad (Green)	96 (Green)	Brite-Rite Industrial

BEAR-TEX CONVOLUTE WHEELS

NORTON (BEAR-TEX)	3M (SCOTCH-BRITE)	STANDARD ABRASIVES (BRITE-RITE)
Series 1000 6 Density A/O, S/C	General Purpose	
Series 1000 7 Density S/C	SST Deburring 7 Density S/C	BriteRite General Purpose 7 Density S/C
Series 1000 7 Density A/O	Cut & Polish 7 Density A/O	BriteRite General Purpose 7 Density A/O
Series 1000 8 Density S/C	SST Deburring 8 Density S/C	BriteRite Deburring 8 Density S/C
Series 1000 8 Density A/O	Cut & Polish 8 Density A/O	BriteRite Deburring 8 Density A/O
Series 1000 9 Density S/C F	EXL Deburring	Brite-Rite Deburring 9 Density
Series 2000	Light Deburring	
Series 4000	EXL, EX2 & EX3 Deburring	BriteRite HP
Metal Finishing 5A M	Metal Finishing 4A M & 5A M	Metal Finishing
Clean & Finish/ Surface Finishing	Multi-Finishing	BriteRite Final Finishing

BEAR-TEX SURFACE BLENDING SCF DISCS AND SCF/STE BELTS

NORTON (BEAR-TEX)	3M (SCOTCH-BRITE)	STANDARD ABRASIVES (BRITE-RITE)
A/O Very Fine (Blue)	Surface Conditioning A VFN	Surface Conditioning FE Very Fine
A/O Medium (Maroon)	Surface Conditioning A MED	Surface Conditioning FE Maroon
A/O Coarse (Brown)	Surface Conditioning A CRS	Surface Conditioning FE Coarse

BEAR-TEX FLAP WHEELS AND INTERLEAF FLAP WHEELS

NORTON (BEAR-TEX)	3M (SCOTCH-BRITE)	STANDARD ABRASIVES (BRITE-RITE)
Medium Density Flap Wheel	Finishing Flap Brush 5 Density	Buff & Blend Flap Brushes - Medium
Hard Density Flap Wheel	Finishing Flap Brush 7 Density	Buff & Blend Flap Brushes - Hard
Flap Wheel with 1/4 Spindle A/O VF	CFFB-S S FIN	
Flap Wheel with 1/4 Spindle A/O Med	CFFB-S A CRS	Mandrel Mounted Flap Brushes - A/O Med
Interleaf Flap Wheel with 1/4 Spindle A/O 60	COMBI-S A 80	Mandrel Mounted Combi-wheels - A/O 60
Interleaf Flap Wheel with 1/4 Spindle A/O 80	COMBI-S A P120	Mandrel Mounted Combi-wheels - A/O 80
Interleaf Flap Wheel with 1/4 Spindle A/O 120	COMBI-S A P180	Mandrel Mounted Combi-wheels - A/O 120

BEAR-TEX UNIFIED WHEELS

NORTON (BEAR-TEX)	3M (SCOTCH-BRITE)	STANDARD ABRASIVES (BRITE-RITE)
NEX	EXL, SST, Cut & Polish Unitized	BriteRite Unitized
General Duty Unified and Deburring Unified	General Purpose	

FLAP WHEELS AND ACCESSORIES

FLAP WHEELS

Designed to deliver a consistent finish with a uniform rate of cut, flap wheels wear away, continually exposing fresh abrasive. Conformable to most shapes, they are available in coarse to fine grit.

Typical Applications

- Metal fabrication
- Blending welds
- Deburring
- Cleaning and finishing

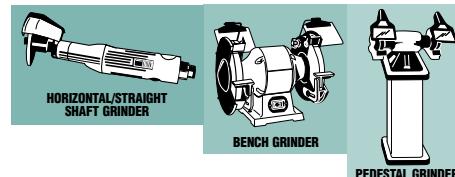


BEST Norton SG R982 Small Diameter Flap Wheels

FEATURES	BENEFITS
• Patented Norton SG ceramic aluminum oxide abrasive	• Superior life and aggressive cut
• X-wt rayon backing	• Extended durability; reduced edge wear
• Available with 1/4" x 1-1/4" steel shank or 1/4"-20 threaded mandrel	• Fast wheel changes

GOOD Metalite R265 Flap Wheels

FEATURES	BENEFITS
• P-graded aluminum oxide abrasive	• Uniform stock removal and long life
• Excellent balance	• Smooth, chatter-free finish
• Small diameter available with 1/4" x 1-1/4" steel shank or 1/4"-20 threaded mandrel	• Fast wheel changes



METALITE R265 LARGE DIAMETER FLAP WHEELS

SIZE DIAMETER X FACE WIDTH X CENTER HOLE	MAX. RPM.	STD. PKG.	GOOD			
			P-40 GRIT UPC NO.	P-60 GRIT UPC NO.	P-80 GRIT UPC NO.	P-120 GRIT UPC NO.
3-1/2 X 1 X 5/8	12,000	10		63642502668	63642502669	63642502670
3-1/2 X 2 X 5/8	12,000	10		63642502671	63642502672	
4 X 1 X 5/8	12,000	10		63642502673	63642502674	63642502675
4 X 2 X 5/8	12,000	10		63642502677		
5 X 1 X 5/8	6,200	5			63642502678	
6 X 1 X 1	6,200	5	63642502679	63642502680	63642502681	63642502682
6 X 1-1/2 X 1	6,200	5		63642502686	63642502687	63642502688
6 X 2 X 1	6,200	5	63642502689	63642502691	63642502692	63642502694
6 X 3 X 1	6,200	5			63642502696	
8 X 1 X 1	4,700	3		63642502697	63642502698	63642502699
8 X 2 X 1	4,700	3		63642502700	63642502701	63642502702
8 X 3 X 1	4,700	3			63642502703	

REDUCING BUSHINGS FOR 1" CENTER HOLE WHEELS ARE AVAILABLE IN THE BEAR-TEX CONVOLUTE WHEEL SECTION.



DIE GRINDER

SMALL DIAMETER FLAP WHEELS

SIZE DIAMETER X FACE WIDTH X SHANK	MAX. RPM.	MIN./ STD. PKG.	BEST			GOOD			
			R982 60 GRIT UPC NO.	R982 80 GRIT UPC NO.	R982 120 GRIT UPC NO.	R265 P-60 GRIT UPC NO.	R265 P-80 GRIT UPC NO.	R265 P-120 GRIT UPC NO.	R265 P-180 GRIT UPC NO.
WITH 1/4" - 20 THREADED MANDREL									
1 X 5/8 X 1/4-20	30,000	10/20				63642502624	63642502625	63642502626	
1 X 1 X 1/4-20	30,000	20/20 10/20	63642502869	63642502870	63642502871	63642502628	63642502629	63642502630	63642502631
1-3/8 X 5/8 X 1/4-20	30,000	10/20				63642502632	63642502633	63642502634	
1-5/8 X 1 X 1/4-20	23,000	10/20				63642502638	63642502639		
2 X 1/2 X 1/4-20	23,000	10/20				63642502642	63642502643	63642502644	63642502645
2 X 1 X 1/4-20	23,000	20/20 10/20	63642502876	63642502877	63642502875	63642502646	63642502647	63642502648	63642502649
2-1/2 X 1/2 X 1/4-20	23,000	10/20						63642502652	
2-1/2 X 1 X 1/4-20	23,000	10/20				63642502654	63642502655	63642502656	
3 X 1/2 X 1/4-20	20,000	10/20				63642502658	63642502659	63642502660	
3 X 1 X 1/4-20	20,000	20/20 10/20		63642502882	63642502883	63642502664	63642502665	63642502666	
WITH 1/4" X 1-1/4" STEEL SHANK									
1 X 5/8 X 1/4	30,000	10/20				63642502576	63642502577	63642502578	
1 X 1 X 1/4	30,000	20/20 10/20	63642502866	63642502867	63642502868	63642502580	63642502581	63642502582	63642502583
1-3/8 X 5/8 X 1/4	30,000	10/20				63642502584	63642502585		
1-5/8 X 1 X 1/4	23,000	10/20				63642502592	63642502593	63642502594	
2 X 1/2 X 1/4	23,000	10/20				63642502596			
2 X 1 X 1/4	23,000	20/20 10/20	63642502872	63642502873	63642502874	63642502600	63642502601	63642502602	63642502603
2-1/2 X 1/2 X 1/4	23,000	10/20					63642502605		
2-1/2 X 1 X 1/4	23,000	10/20				63642502608	63642502609	63642502610	
3 X 1/2 X 1/4	20,000	10/20				63642502612	63642502613	63642502614	63642502615
3 X 1 X 1/4	20,000	20/20 10/20	63642502878	63642502879	63642502880	63642502620	63642502621	63642502622	63642502623

PORTABLE TOOL ADAPTER KIT FOR LARGE DIAMETER FLAP WHEELS

To permit use of coated abrasive flap wheels on 1/4" electric drills and other adjustable-chuck power tools, a special adapter kit is available with a 1/4" steel shank. The kit will accommodate flap wheels 3-1/2" through 6" in diameter with face widths up to and including 1-1/2", with 5/8" center hole only (may be used on wheels with 1" center holes reduced to 5/8" with reducing bushings).



STD. PKG	UPC NO.
1 KIT	63642542750

SpecCheck

RECOMMENDED GRIT SELECTION

STOCK REMOVAL/
ROUGH FINISHING

40, 60 Grit

SURFACE PREPARATION/
BLENDING

80, 120 Grit

LIGHT FINISHING / CONTOURING

180 Grit

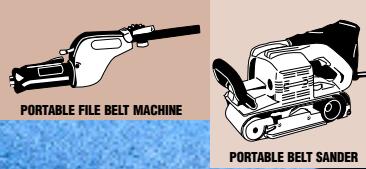


ADAPTERS FOR SMALL DIAMETER FLAP WHEELS WITH 1/4"-20 THREADED MANDREL

DESCRIPTION	SHANK LENGTH	STD. PKG.	UPC NO.
1/4" DIAMETER X 1" LONG	5/8"	10	63642543318
1/4" DIAMETER X 4" LONG	5/8"	10	63642543319



FILE & PORTABLE BELTS



File belt specifications to perform on the most demanding, intricate shapes, profiles and materials. Portable belts are ideal for all your metal and woodworking applications.

Typical File Belt Applications

- Light weld removal and blending
- Shape and contour sanding
- Surface preparation prior to coating and plating
- Removing cutting tool marks from molds and dies
- General clean-up and finishing

Typical Portable Belt Applications

- Grinding and finishing of all metals
- Blending of welds
- Sanding and finishing of wood
- Glass seaming and polishing



BEST Norton SG R981 Belts – The premium performer, patented Norton SG abrasive

FEATURES	BENEFITS
• Patented Norton SG ceramic aluminum oxide abrasive	• Exceptional life and value, especially on hard-to-grind alloys • Aggressive cut rate • Sharpness maintained throughout life of the belt
• Grinding aid coating	• Cooler cut, burn-free grinding of heat-sensitive materials • Minimizes loading
• Heavy Y-wt polyester backing	• Extended durability



BETTER NorZon Plus R823 Belts – The choice for stainless steel

FEATURES	BENEFITS
• Premium self-sharpening zirconia alumina abrasive	• Aggressive, rapid cut rate
• Improved grain adhesion, durable grain coating	• Longer life
• Waterproof for use on a broad range of materials	• Versatile
• Strong X-wt polyester backing, available in finer grit range	• For moderate to heavy pressure applications



GOOD Metalite R228 Belts – For metal and wood

FEATURES	BENEFITS
• Aluminum oxide abrasive	• Aggressive cutting/resistant to heat
• Strong X-wt cotton backing	• Versatile



GOOD Metalite R283 Belts – Versatility for all MRO applications

FEATURES	BENEFITS
• P-graded premium aluminum oxide abrasive	• Consistent, cool cut
• Semi-flexible backing	• Tear and fray resistant





PORTABLE FILE BELT MACHINE

FILE BELTS 1/4" TO 1-1/2" WIDE, 12" TO 30" LONG

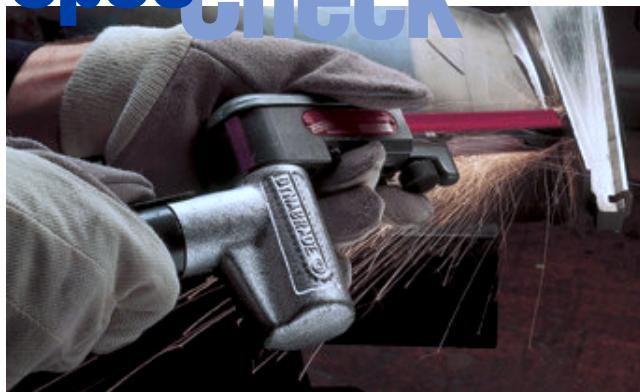
SIZE W X L	GRIT	MIN./ STD. PKG.	BEST		BETTER		GOOD	
			NORTON SG R981† UPC NO.	JOINT/ FLEX	NORZON PLUS R823† UPC NO.	JOINT/ FLEX	METALITE R283* UPC NO.	JOINT/ FLEX
1/4 X 24	60 80 120	50/200	78072756534	PG, S	78072728551 78072728550	PG, S PG, S	78072727548 78072727547	PG, L PG, L
3/8 X 13	60 80	50/200			78072740295 78072736062	PG, S PG, S		
1/2 X 12	40 50 60 80 100 120	50/200	78072718700 78072718701 78072718702	PG, S PG, S PG, S	78072728745 78072728744	PG, S PG, S	78072727557	PG, L
1/2 X 18	40 60 80 120	50/200	78072718704 78072718705 78072718706	PG, S PG, S PG, S	78072728569 78072728568 78072728567	PG, S PG, S PG, S	78072727561 78072727560 78072727559 78072727558	PG, L PG, L PG, L PG, L
1/2 X 24	36 40 50 60 80 100 120	50/200	78072746126 78072718707 78072718708 78072718709	PG, S PG, S PG, S PG, S	78072728564	PG, S	78072727568 78072727567 78072727566 78072727565	PG, L PG, L PG, L PG, L
3/4 X 18	60 80 120	50/200	78072745691 78072756309 78072756308	PG, S PG, S PG, S	78072709590 78072758953 78072736178	PG, S PG, S PG, S		
3/4 X 20-1/2	40 50 60 80 100 120	50/200	78072718714 78072718715 78072718716	PG, S PG, S PG, S	78072728560 78072728559	PG, S PG, S	78072727573	PG, L
78072728557						PG, S	78072727571 78072727570 78072727569 78072727575	PG, L PG, L PG, L PG, L
1 X 12	60	50/200			78072753073	PG, S		
1 X 24	50 100 120	50/200	78072710374 78072710037 78072710840	PG, S PG, S PG, S				
1 X 30	40 60 80 120	50/200	78072718723 78072718724	PG, L PG, L	78072728583 78072728582	PG, L PG, L	78072727582 78072727579 78072727577	PG, L PG, L PG, L
1-1/2 X 18-15/16	60	10/50					78072727588	NORLOK, L

REFER TO PAGE 80 FOR JOINT AND FLEX DESCRIPTIONS

* P-GRADED

† WATERPROOF

SpecCheck



STARTING RECOMMENDATIONS

MATERIAL	HEAVY DUTY	GENERAL DUTY
Carbon Steel	Norton SG R981	Metalite R283, R228
Stainless Steel/Alloys	Norton SG R981	NorZon Plus R823
Cast Iron	Norton SG R981	Metalite R283, R228
Brass/Bronze	NorZon Plus R823	NorZon Plus R823
Aluminum	NorZon Plus R823	Metalite R283
Wood	NorZon Plus R823	Metalite R228

RECOMMENDED GRIT SELECTION

ROUGH/HEAVY DUTY	INTERMEDIATE	FINISHING/POLISHING
36-50	60-100	100-120



PORTABLE BELT SANDER

FILE & PORTABLE BELTS

PORTABLE BELTS 3" TO 4" WIDE, 15-1/2" TO 24" LONG

FILE & PORTABLE BELTS

SIZE W X L	GRIT	MIN./ STD. PKG.*	BEST		BETTER		GOOD	
			NORZON SG R981†	JOINT/ FLEX	NORZON PLUS R823†	JOINT/ FLEX	METALITE R228	JOINT/ FLEX
3 X 18	36	5/25					78072721666	PLYWELD, S
	50						78072721664	PLYWELD, S
	80						78072721662	PLYWELD, S
	120						78072721660	PLYWELD, S
3 X 21	40	5/25					78072721691	PLYWELD, S
	50						78072721690	PLYWELD, S
	60						78072721685	PLYWELD, S
	80						78072721680	PLYWELD, S
	100						78072721676	PLYWELD, S
	120						78072721675	PLYWELD, S
3 X 24	40	5/25					78072721765	PLYWELD, S
	50						78072721760	PLYWELD, S
	60						78072721755	PLYWELD, S
	80						78072721750	PLYWELD, S
	100						78072721745	PLYWELD, S
	120						78072721740	PLYWELD, S
	150						78072721739	PLYWELD, S
	180						78072721736	PLYWELD, S
	36		78072700783	PLYWELD, S			78072721997	PLYWELD, S
3-1/2 X 15-1/2	50	5/25	78072762056	PLYWELD, S			78072722000	PLYWELD, S
	60		78072718750	PLYWELD, S	78072767536	PLYWELD, S	78072721995	PLYWELD, S
	80		78072718751	PLYWELD, S	78072753074	PLYWELD, S		
	100				78072772454	PLYWELD, S		
	120				78072769544	PLYWELD, S		
	180		78072718753	PLYWELD, S	78072767198	PLYWELD, S		
	36						78072722058	PLYWELD, RR
4 X 24	40	5/25					78072722057	PLYWELD, S
	50						78072722056	PLYWELD, S
	60						78072722055	PLYWELD, S
	80						78072722050	PLYWELD, S
	100						78072722045	PLYWELD, S
	120						78072722044	PLYWELD, S

REFER TO PAGE M80 FOR JOINT AND FLEX DESCRIPTIONS.

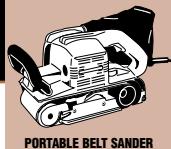
† WATERPROOF

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FILE & PORTABLE BELTS - CROSS REFERENCE

NORTON	3M	HERMES	KLINGSPOR	SAIT	SIA	VSM
Norton SG R981	977F, 777F, 967F 963G, 963H, 967F		CS612YY			SK840X
NorZon Plus R823	551E Cubicut XE	RB844Y	CS411YX			KK715X
ADDITIONAL FILE BELTS						
Metalite R283	231D, 241E, 261E 311ED, 331D, 351E, 353E	RB317J, RB316EJ RB303 Flex	CS310XF		933A, 936A	KK711T, KK511J
ADDITIONAL PORTABLE BELTS						
NorZon Plus Contractor Pack	561D Y, 568D Y, 761D	RB484TY	CS411X	ZH		
Metalite R228	240DZ OPK, 260DZ OPK 241D, 248D, 251D 3411, 351D	RB316XOP RB372YOP RB346MX	CS311X	AOX	2903X0	KK511X KK711X
All Purpose Contractor Pack	270D, 270DZ, 272DZ 260D, 362RZ	RB316-34XOP	CS311X CS413Y			KK524X

FILE & PORTABLE BELTS



PORTABLE BELT SANDER

CONTRACTOR PACKS

BETTER	NorZon Plus Contractor Pack Belts
FEATURES	BENEFITS
• New generation premium self-sharpening, zirconia alumina abrasive	• Aggressive, rapid cut rate, long life
• Reversible butt splice	• Use in either direction for longer life
• Open coat design, strong Y-wt backing	• Reduced loading, extended life
• Tri-lingual, job specific application information	• Simplifies selection
• Durable, resealable packages	• Minimize waste and damage • Portable; ideal for wall merchandising and carrying to the job site



GOOD	All Purpose Contractor Pack Belts
FEATURES	BENEFITS
• Aluminum oxide abrasive	• Tough and durable, with an aggressive cutting action
• X-wt cotton backing	• Versatile; ideal for metal and wood
• Tri-lingual, job specific application information	• Simplifies selection
• Durable, resealable packages	• Minimize waste and damage • Portable; ideal for wall merchandising and carrying to the job site



SIZE W X L	GRIT	STD. PKG.*	BETTER	GOOD
			NORZON PLUS CONTRACTOR PACK	ALL PURPOSE CONTRACTOR PACK
3 X 18	36	25	07660749260	
	50		07960749259	07660700964
	80		07660749258	07660700968
	120		07660749256	07660700969
3 X 21	36	25	07660749266	07660701741
	50		07660749265	07660701740
	80		07660749264	07660702064
	100		07660749263	07660702063
	120		07660749262	07660702062
3 X 24	36	25	07660749272	07660701743
	50		07660749271	07660701742
	80		07660749270	07660702067
	100		07660749269	07660702066
	120		07660749268	07660702065
4 X 24	36	25	07660749278	07660701745
	50		07660749277	07660701744
	80		07660749276	07660702069
	100		07660749275	
	120		07660749274	07660702068

*PACKED 5 BELTS PER CONTRACTOR PACK; 5 CONTRACTOR PACKS PER STANDARD PACKAGE.
SOLD AND PRICED PER BELT.

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SpecCheck

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSES	CORRECTION
Belt splice breakage	Tension too tight	Reduce tension
Reduced belt life	Too fine a grit Too high pressure	Use coarser grit Reduce pressure



SPEED-LOK TS AND TR DISCS



VERTICAL SHAFT GRINDER

The tool-free twist-on and off fastening systems make fast work of disc changes to maximize productivity by minimizing downtime.

Typical Applications

Fibre Discs

- Weld grinding and blending
- Heavy metal removal
- Light deburring and finishing

Cloth Discs

- Light to medium pressure grinding
- Blending, leveling and finishing applications
- For use on contours or flat surfaces



Norton Speed-Lok TS and TR Discs

FEATURES	BENEFITS
• Speed-Lok fastener	• Quick, tool-free disc changes allow for more grinding time
• Twist on and twist off in 2-1/2 turns	• Disc locks securely to back-up pad, but is easily removed
• 1" - 4" TS discs – all-metal fasteners	• Mount to the Norton Speed-Lok TS or Standard Abrasives' Quick Change back-up pads
• 1-1/2" - 4" TR discs – rubber threaded hubs	• Mount to Norton TR or 3M Roloc back-up pads

BEST Norton SG F944 Fibre – The choice for heavy stock removal

FEATURES	BENEFITS
• Patented Norton SG ceramic aluminum oxide	• Exceptional life and value
• F944 – Heavy fibre backing	• Reduced edge wear for aggressive applications • Highest productivity on hard to grind alloys



BEST Norton SG R981 Cloth – Ideal on exotic and heat-sensitive metals

FEATURES	BENEFITS
• Patented Norton SG ceramic aluminum oxide abrasive	• Aggressive cut rate • Sharpness maintained throughout life of the discs
• Grinding aid coating	• Long life, burn-free grinding of heat-sensitive materials • Minimized loading
• Heavy Y-wt backing	• Extended durability • Reduced edge-wear



BETTER NorZon Plus R821 Cloth – The choice for grinding and deburring stainless steel

FEATURES	BENEFITS
• Self-sharpening, zirconia alumina abrasive	• Cooler cut, longer life
• Heavy Y-wt backing, two-ply construction	• Extended durability • Reduced edge-wear



GOOD Metalite R228 Cloth – Metalworking, versatile

FEATURES	BENEFITS
• Premium aluminum oxide abrasive	• Long life
• Heavy-weight cloth construction	• Excellent durability
• X-wt cotton backing	• Ideal for aggressive stock removal applications • Resistant to heat



FLAP DISCS



Our flap discs are engineered for light stock removal, blending and finishing all in one application. They grind like a depressed center wheel and finish like a fibre disc – helping you reduce process time and lower your total grinding costs.

Typical Applications

- Stock removal
- Blending welds
- Edge chamfering
- Deburring
- Rust removal
- Cleaning and finishing



TYPE 29



TYPE 27



NORTON TYPE 27 JUMBO
MERIT HIGH DENSITY



FLAP DISCS

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BEST TwinFiber Type 29 Flap Discs - For maximum stock removal

FEATURES	BENEFITS
• Premium ceramic and zirconia alumina abrasives blend	• Excellent performance and efficiencies on stainless and carbon steel applications
• Durable, fiberglass back	• Less pressure for aggressive stock removal • Long life
• Type 29 - angled face; conical shape	• Maximum contact with work surface without loading



BEST TwinStar Type 27 Flap Discs - For fine finishes

FEATURES	BENEFITS
• Premium ceramic and zirconia alumina abrasives blend	• Excellent performance and efficiencies on stainless and carbon steel applications
• Type 27 - flat face; plastic back	• Plastic wears away with abrasive - for longer life • More forgiving than Type 29 - producing smooth finishes



BETTER Charger R822 - Type 29, Type 27 and Type 27 Jumbo Flap Discs

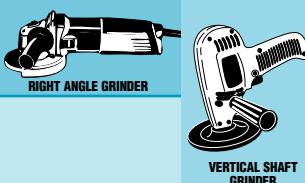
FEATURES	BENEFITS
• High performance zirconia alumina abrasive	• Aggressive cut and long life • Up to 30% longer life than aluminum oxide products
• Durable, fiberglass-construction back	• Less pressure for aggressive stock removal and long life



GOOD Merit Type 27C, Type 27 HD, Minis - Fast stock removal with fine finishes

FEATURES	BENEFITS
• High performance zirconia alumina grain with a phenolic resin backing	• Fast cutting; fine finishes



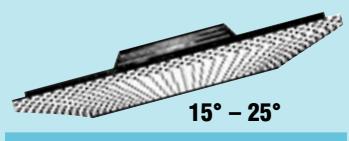


TWO BASIC FLAP DISC DESIGNS

Norton Type 29 Conical / Merit Type 27C Conical

THE MOST AGGRESSIVE CHOICE

- Conical flap discs have flaps angled at 10 degrees and may be used on both conical and flat surfaces
- The angle provides greater surface contact and as a result, tends to be the most aggressive choice
- The best choice when speed is a primary consideration



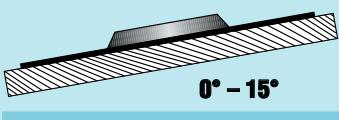
GRIND AT
STeeper Angles

15° - 25°

Norton and Merit Type 27 Flat

THE CHOICE FOR THE BEST FINISH

- The Type 27 flap disc has a flat design and is used primarily on flat surfaces
- The best choice for smooth finishing
- Now available in Norton Jumbo / Merit High Density sizes with extra large flaps lasting up to 40% longer than standard flap discs
- Choice will also depend on user preference of grinding angle (severe angle will weaken the edges)

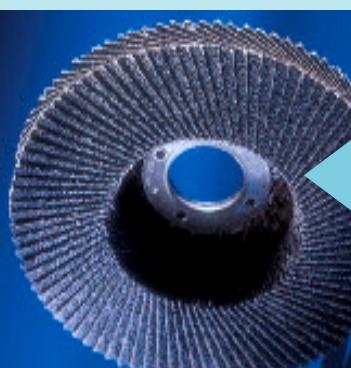


GRIND AT
Flatter Angles

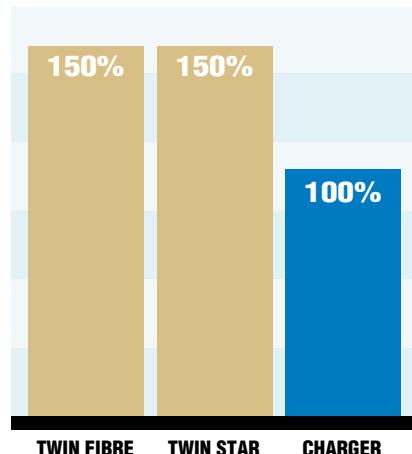
0° - 15°

FLAP DISC STARTING RECOMMENDATIONS BY MATERIAL

MATERIAL	HEAVY-DUTY / AGGRESSIVE STOCK REMOVAL	FINE FINISHING
Carbon and stainless steel	TwinFiber Type 29	TwinStar Type 27
Other ferrous and nonferrous materials	Charger R822 Type 29	Charger Type 27



RELATIVE FLAP DISC LIFE



Tech Tips

■ Operate Type 29/27C flap discs at a 15° - 25° angle; operate Type 27 (Regular and Jumbo / High Density) flap discs at an angle less than 15°; more severe angles will weaken flap edges.

■ Use one grit size coarser than fibre discs, except in 36 grit.



It is the user's responsibility to refer to and comply with ANSI B7.1.

FLAP DISC COMPETITIVE CROSS REFERENCE

NORTON	DEWALT	GARRYSON	GEMTEX	KLINGSPOR	PFERD	SAIT	3M	WALTER	WEILER
TwinStar								Enduroflex	
TwinFiber		Zirc +					747D Regalite		
Charger R822	Zirc	Zirc	Zirc	SMT626	Polifan	Saitlam F ZH	563D	Quick Step	Tiger, Big Cat
Merit		Zirc	A/O			Saitlam 2A		Vortec	

FLAP DISCS



RIGHT ANGLE GRINDER



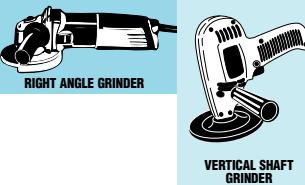
VERTICAL SHAFT GRINDER

FLAP DISCS

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SIZE	GRIT	MAX. RPM	STD. PKG.	BEST	STD. PKG.	BETTER	STD. PKG.	GOOD
				TYPE 29 TWINFIBER UPC NO.		TYPE 29 CHARGER R822 UPC NO.		TYPE 27C CONICAL MERIT POWERFLEX UPC NO.
TYPE 29								
4 X 5/8	36 40 60 80 120	15,000			5	66261119265 66261119264 66261119263 66261119262 66261119261		
4-1/2 X 5/8-11	24 36 40 60 80 120	13,000			5	66261121291 66261121290 66261121289 66261121288 66261121287 66261121286	10	08834194803 08834194804 08834194805
4-1/2 X 7/8	24 36 40 60 80 120	13,000	10	63642504329 63642504330 63642504331 63642504332 63642504333	5	66261119271 66261119270 66261119269 66261119268 66261119267 66261119266	10	08834194296 08834194766 08834194767 08834194768
5 X 7/8	24 36 40 60 80 120	13,000			5	66261119277 66261119276 66261119275 66261119274 66261119273 66261119272	10	08834193649 08834193650 08834193651 08834193652
7 X 5/8-11	24 36 40 60 80 120	8,600			5	66261119289 66261119288 66261119287 66261119286 66261119285 66261119284	10	08834197210 08834197212 08834197213
7 X 7/8	24 36 40 60 80 120	8,600	10	63642504334 63642504335 63642504336 63642504337 63642504338	5	66261119283 66261119282 66261119281 66261119280 66261119279 66261119278	10	08834197194 08834197195 08834194777 08834197199 08834197204

SIZE	GRIT	MAX. RPM.	STD. PKG.	BETTER	STD. PKG.	GOOD
				TYPE 27 JUMBO CHARGER R822 UPC NO.		TYPE 27 HIGH DENSITY MERIT POWERFLEX UPC NO.
TYPE 27 JUMBO / HIGH DENSITY						
4-1/2 X 5/8-11	40 60 80	12,000	5	63642503527 63642503528 63642503529		
4-1/2 X 7/8	40 60 80	12,000	5	63642503531 63642503532 63642503533	10	08834190172 08834190767 08834194360
7 X 5/8-11	40 60 80	8,600	5	63642503539 63642503540 63642503541		
7 X 7/8	40 60 80	8,600	5	63642503535 63642503536 63642503537	10	08834190933 08834194514 08834194362



TYPE 27

SIZE	GRIT	MAX. RPM.	STD. PKG.	BEST		STD. PKG.	BETTER		STD. PKG.	GOOD	
				TYPE 27 TWINSTAR UPC NO.	TYPE 27 CHARGER R822 UPC NO.		TYPE 27 MERIT POWERFLEX UPC NO.	TYPE 27 MERIT POWERFLEX UPC NO.			
2" TYPE II TURN-ON	36 40 60 80 120	24,000				10				08834195020 08834195021 08834195022 08834195023 08834195024	
3" TYPE II TURN-ON	36 40 60 80 120	20,000				10				08834195035 08834195036 08834195037 08834195038 08834195039	
4-1/2 X 5/8-11	36 40 60 80	13,000				5	63642503510 63642503511 63642503512 63642503513				
4-1/2 X 7/8	36 40 60 80 120	13,000	10	63642504876 63642504877 63642504878 63642504879 63642505279		5	66261134069 66261134070 66261134071				
5 X 7/8	36 40 60 80 120	13,000	10	63642505281 63642505282 63642505283 63642505284 63642505285		5	63642503514 63642503515 63642503516 63642503517				
7 X 5/8-11	36 40 60 80	8,600				5	63642503518 63642503519 63642503520 63642503521				
7 X 7/8	36 40 60 80 120	8,600	10	63642504880 63642504881 63642504882 63642504883 63642505280		5	66261134072 66261134073 66261134074				



MINI POWERFLEX HOLDER

DESCRIPTION	STD. PKG.	UPC NO.
MINI POWERFLEX TYPE II HOLDER	1	08834168539
MINI POWERFLEX TYPE III HOLDER	1	08834160172

FIT 2" AND 3" MERIT FLAP DISCS



RIGHT ANGLE GRINDER

FIBRE AND AVOS DISCS

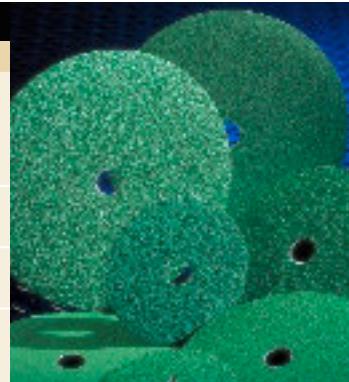
The industry's most complete fibre disc offering: from products coated with premium performance Norton SG grain to the improved generation of NorZon Plus grain to long lasting aluminum oxide. Norton fibre discs feature a full resin bond system with heavy duty fibre backing for increased strength, durability and tear resistance.



Typical Applications

- Material removal
- Weld grinding and blending
- Light deburring and finishing

BEST	GreenLyte SG F968 and GreenLyte Plus SG F986 – Greatest productivity
FEATURES	BENEFITS
• Premium, dense, self-sharpening SG ceramic abrasive grain with a unique coating design	• Faster initial cut rate, longer life and improved finishes versus competitive ceramic and F944 and F941 • Greatest productivity vs. any fibre disc and lowest total costs • Greater chip clearance; minimal loading
• F986 has a self-lubricating, supersizing treatment	• Superb on stainless steel and steel alloys • Provides better finishes and longer life
• F968 versatility	• The choice for grinding and finishing carbon steel, mild steel, cast iron and welds
• 7" and 9-1/8" discs have doming design	• Ideal for edges and corners • Better shape control; resists curling



BETTER	NorZon Plus F826 – Ideal on stainless, alloy, and high pressure applications
FEATURES	BENEFITS
• Premium self-sharpening zirconia aluminum abrasive	• Fast, aggressive cutting • Self-sharpenes with use
• Advanced resin bond technology with enhanced grain adhesion	• More parts per hour to lower grinding costs



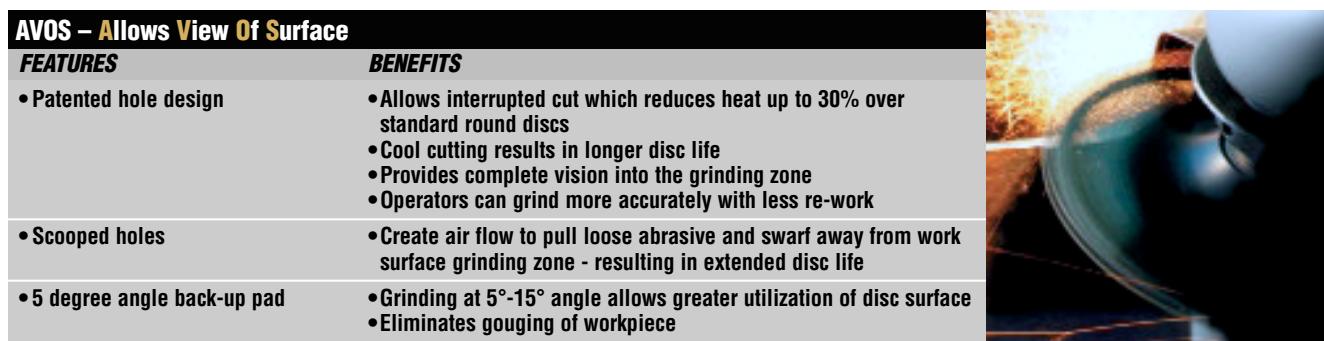
BETTER	Merit Ceramic - The economical choice for heavy stock removal
FEATURES	BENEFITS
• High performance ceramic alumina abrasive on a heavy fibre backing	• Engineered for heavy stock removal
• Economically priced	• The choice when price is a main consideration



BETTER	Merit Zirconia - The economical choice for stainless steel applications
FEATURES	BENEFITS
• Durable zirconia alumina abrasive on a heavy fibre backing	• Great performance on stainless steel at an economical price



FIBRE AND AVOS DISCS



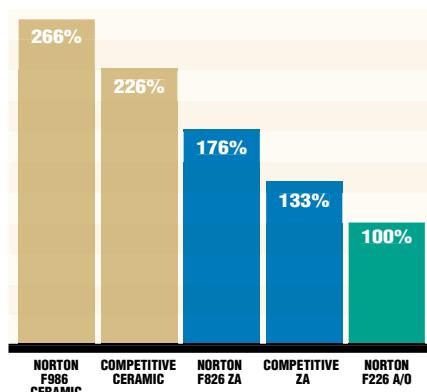
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STARTING RECOMMENDATIONS BY MATERIAL

MATERIAL	HEAVY DUTY BEST PERFORMANCE	GENERAL DUTY INITIAL VALUE
Carbon Steel	GreenLyte SG F968	NorZon Plus F826
Stainless Steel/ Alloys	GreenLyte Plus SG F986	NorZon Plus F826
Cast Iron	GreenLyte SG F968	NorZon Plus F826
Welds	GreenLyte SG F968	NorZon Plus F826
Brass/Bronze	NorZon Plus F826	Metalite F226
Aluminum	GreenLyte Plus SG F986	NorZon Plus F826
Fiberglass	GreenLyte SG F968	NorZon Plus F826
Paint Removal	GreenLyte SG F968, GreenLyte Plus SG F986 NorZon Plus F826	Metalite F226

RELATIVE METAL REMOVAL RATE

50 Grit on Low Pressure Carbon Steel



FIBRE DISC COMPETITIVE CROSS REFERENCE

NORTON	GEMTEX	HERMES	KLINGSPOR	SAIT	3M	VSM	WALTER
Norton SG F986 (Supersized)					987C, 785C	SF840	
Norton SG F988		CB444X	CS665		983C, 984C	SF750	
Merit Ceramic	Ceramix "X"			7S			KF710
NorZon Plus F826		RB414X	CS565		501C	ZF713	
Merit Zirconia Alumina	G Type ZEE Type			Z			TOPCUT STAINLESS
Gemini F226		RB314X	CS561	A0	281C, 381C	KF708	
Merit Aluminum Oxide	A Type C Type			2A, 3A			COOLCUT

FIBRE AND AVOS DISCS

SIZE	GRIT	MIN./STD. PKG. **	BEST			BETTER			GOOD	
			GREENLYTE SG PLUS F986 BOXED	GREENLYTE SG F968 BOXED	GREENLYTE SG F968 BALED**	NORZON PLUS F826 BOXED	MERIT CERAMIC BOXED	MERIT ZA BOXED	GEMINI METALITE F226 BOXED	MERIT A/O BOXED
UPC PREFIX			662611	662611	662611	662611	666233	666233	662611	666233
4" X 5/8"	24	25/25							33434	
	36								33433	
	50								33432	
	60								33431	
	80								33430	
	100								33429	
	120								33428	
4-1/2" X 7/8"	24	25/25	41306	41313		38457	55601	53315	33519	53309
	36		41305	41312		38456	55602	53316	33517	53306
	50		41304	41311		38454	55603	53318	33515	53310
	60		41303	41310		38453	55604	53319	33513	53311
	80		41302	41309		38452		53320	33511	53312
	100			41308					33509	53313
	120			41307					33507	53314
5" X 7/8"	16	25/25				38563	55597	57290	33617	
	24		41301	41320		38562	55598	57291	33615	57276
	36		41300	41319		38561	55599	57292	33610	57277
	50		41299	41318		38601	55600	57293	33605	57278
	60		41298	41317		38600		57294	33600	57279
	80		41297	41316					33595	57280
	100			41315					33590	57281
	120			41314					33585	57282
7" X 7/8"	16	25/25				38594	55578	57295	33760	
	24		41296*	41327*	41334*	38593	55594	57296	33755	57283
	36		41295*	41326*	41335*	38592	55595	57297	33750	43057**
	50		41294*	41325*	41336*	38591	55596	57298	33745	57285
	60		41293*	41324*	41337*	38590		57299	33740	43058**
	80		41292*	41323*	41338*				33735	57286
	100			41322*					33730	57287
	120			41321*					33725	57288
9-1/8" X 7/8"	16	25/25				38584			33890	
	24		41290*	41344*		38583			33885	
	36		41289*	41343*		38582			33880	
	50		41288*	41342*		38581			33875	
	60		41287*	41341*					33870	
	80		41286*	41340*					33865	
	100			41339*					33860	
	120								33855	

* ALL 7 X 7/8" AND 9-1/8 X 7/8" GREENLYTE F968 AND GREENLYTE PLUS F986 DISCS FEATURE OUR DOMING DESIGN.

** BALED ITEMS: MIN./STD. PKG. = 100/100

AIR-COOLED RUBBER BACK-UP PADS

- Designed for medium to heavy grinding applications.
- Slotted aluminum hub design draws cool air behind the disc.
- Curved ribs on the rubber face force heat away from the disc and back-up pad.
- Cooler cutting action reduces disc loading and increases grinding life.
- All pads have a 5/8"-11 threaded female hub for mounting.
- Firm pads provide more aggressive cut; medium pads offer greater flexibility;
- Use with Norton and Merit fibre discs to maximize cut and life.



DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
RUBBER BACK-UP PADS			
4" MEDIUM	12,000	5	63642504918
4-1/2" MEDIUM	11,000	5	63642502122
5" MEDIUM	10,000	5	63642543421
7" FIRM	8,600	5	63642543425
7" MEDIUM	8,600	5	63642543422
9" FIRM	6,600	5	63642543426
9" MEDIUM	6,600	5	63642543423
#103 RETAINER NUT	—	10	63642543463
#834 RETAINER NUT SPANNER WRENCH	—	5	63642543005
66NS SHORT RETAINER NUT	—	10	63642543461

AIR-COOLED BACK-UP PADS

For 5/8-11 arbor, these "no nose" pads are designed for shorter-shafted right-angle grinders.



DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
AIR COOLED BACK-UP PADS			
4-1/2" MEDIUM SPIRALCOOL PAD	11,000	5	63642504872
5" MEDIUM SPIRALCOOL PAD	10,000	5	63642503000



FIBRE AND AVOS DISCS

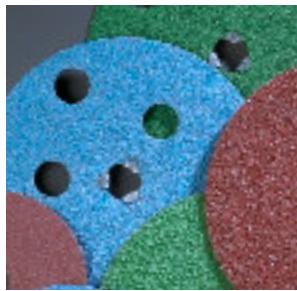


NEW BALING SYSTEM FOR F968 AND F226 7 X 7/8 DISCS

Some GreenLyte SG F968 and Gemini F226 products are now available with the new Norton threaded baling units, allowing the discs to remain under pressure even after being opened.

- Places 100 discs on a spindle between two plates
- Locks down with a pinch screw
- Maintains the shape of the discs by minimizing curl
- User-friendly and reusable

FIBRE AND AVOS DISCS



SPEED-LOK FIBRE DISCS

These discs feature Norton quick-tool-free, twist-on and off Speed-Lok fasteners. Discs lock to back-up pads – but are easily removed – increasing your grinding time and productivity.

SIZE	GRIT	MIN./ STD. PKG.	BEST	BETTER	GOOD
			GREENLYTE SG PLUS F986 BOXED UPC NO.	NORZON PLUS F826 BOXED UPC NO.	GEMINI METALITE F226 BOXED UPC NO.
SPEED-LOK FIBRE DISCS					
5 X 7/8 SPEED-LOK	24 36 60 80	25/25		66261138797 66261138796 66261138792	66261137522 66261137515
7 X 7/8 SPEED-LOK	24 36 50 60 80 100 120	25/25		66261138819 66261138818 66261138817 66261138816 66261138815	66261137625 66261137620 66261137615 66261137605 66261137600 66261137595
AVOS EDGER SPEED-LOK DISCS					
4-1/2" AVOS EDGER SPEED-LOK	24 36 50 60 80	10/40	66261145476 66261145477 66261145478 66261145479 66261145480	66261129718 66261129719 66261129720 66261129721 66261129722	
5" AVOS EDGER SPEED-LOK	24 36 50 60 80	10/40	66261144046 66261144047 66261144048 66261144049	66261126556 66261126557 66261126558 66261126559 66261126560	
7" AVOS EDGER SPEED-LOK	24 36 50 60 80	10/40	66261144050 66261144051 66261144052 66261144053	66261137454 66261137455 66261137456 66261137457 66261137458	

SPEED-LOK BACK-UP PADS

- Molded rubber back-up pads provide quick-change convenience
- Hard density pads are for aggressive cutting action
- Medium density pads are for all-purpose applications
- Soft density pads are used for contours and fine finishing work
- All pads have a 5/8"-11 threaded female hub. These pads can be adapted to use conventional 7/8" center hole fibre discs by using a 66NS Retainer Nuit to mount the disc to the Speed-Lok pad.



DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
5" MEDIUM	12,000	5	63642543235
7" HARD	8,600	5	63642543240
7" MEDIUM	8,600	5	63642543245
7" SOFT	8,600	5	63642543250
9" MEDIUM	7,000	5	63642543270
66NS SHORT RETAINER NUT	—	10	63642543461

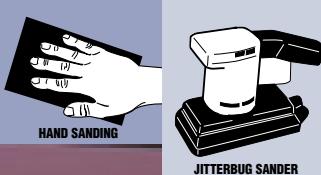
AVOS EDGER SPEED-LOK BACK-UP PADS

Fiberglass-reinforced, plastic Speed-Lok back-up pads for use with AVOS discs.



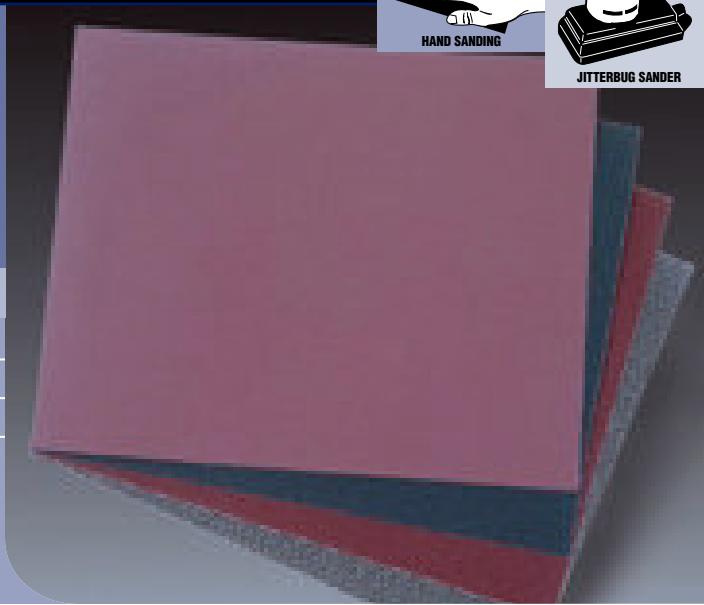
DESCRIPTION	MAX. RPM	STD. PKG.	UPC NO.
AVOS SPEED-LOK BACK-UP PADS			
4-1/2" X 3/8-24	13,000	5	63642502986
4-1/2" X 5/8-11	13,000	5	63642502985
4-1/2" X M-14 X 2	13,000	5	63642503062
5 X 3/8-24	13,000	5	63642502822
5 X 3/8-24 PISTOL GRIP ADAPTER	20,000	5	63642503029
5 X 5/8-11	13,000	5	63642502517
5 X 5/8-11 THICK	13,000	5	63642503663
5 X 7/16-20 PISTOL GRIP ADAPTER	20,000	5	63642503030
5 X M-14 X 2	13,000	5	63642502823
7" ROUND, HARD	8,600	5	63642504873
7" ROUND, MEDIUM	8,600	5	63642504874
7" ROUND, SOFT	8,600	5	63642504875

CLOTH & PAPER SHEETS



CLOTH SHEETS

Engineered for maximum flexing and fast cutting, cloth sheets have a longer life than paper sheets. They tear clean and straight without shedding and are packed in a protective dispenser to eliminate waste and damage.



Typical Applications

- Scouring and light deburring
- Scale and rust removal
- Blending machine tool marks
- Fine sanding and polishing

GOOD Metalite K225 – Designed for general purpose metalworking applications

FEATURES	BENEFITS
• Premium P-graded aluminum oxide abrasive	• Greater cut rate than competitive products
• Advanced full resin bond system	• Exceptional grain adhesion for longer life
• Flexible J-wt backing	• Superior conformability to complex surfaces



GOOD Lightning Metalite K227 – The choice for quality finishing and polishing

FEATURES	BENEFITS
• Mild acting bond system	• Produces fine finishes on all shapes
• Flexible J-wt backing	• Superior conformability to complex surfaces



GOOD Emery K622/Crocus K624 – Ideal for extra fine finishes

FEATURES	BENEFITS
• K622 – Highest quality, natural emery abrasive	• Produces extra fine finishes, ideal for lapping
• K624 – Ferrous oxide abrasive (Crocus)	• Best for polishing soft, nonferrous metals



GOOD Screen-Bak Durite Q421 – For wet or dry applications

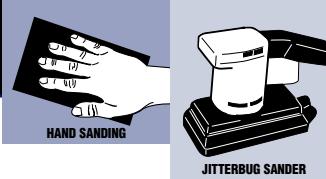
FEATURES	BENEFITS
• Silicon carbide abrasive on an open mesh backing	• Extreme resistance to loading, long life • Waterproof



CLOTH & PAPER SHEETS

CLOTH & PAPER SHEETS

9 X 11 CLOTH SHEETS



SIZE	GRIT	MIN./STD. PKG.	GOOD				
			METALITE K225* UPC NO.	METALITE K227** UPC NO.	EMERY K622 UPC NO.	CROCUS K624 UPC NO.	SCREEN-BAK DURITE Q421† UPC NO.
9 X 11	50	25/125	66261101862*	66261101750			66261100960 66261100955•
	60	25/125	66261101861*				
	80	25/125	66261126340	66261101745			
	100	50/250	66261126339				
	120	50/250	66261126338	66261101740			
	150	50/250	66261126337	66261101735			
	180	50/250	66261126336	66261101730			
	220	50/250	66261126335				
	240	50/250	66261126334	66261101720			
	280	50/250	66261126333				
EXTRA COARSE	320	50/250	66261126332	66261101710		66261100920• 66261100915•	
	400	50/250	66261126331	66261101705			
	500	50/250	66261126330	66261101700			
	600	50/250					
	EXTRA COARSE	25/125					
	COARSE	25/125					
	MEDIUM	50/250					
	FINE	50/250					
	FINER THAN 500	50/250					

*SUPPLIED IN E-Z FLEX METALITE K224

• P-GRADED **K227 IS P-GRADED </= 180 GRIT

†WATERPROOF

• PACKAGING STANDARDS: MIN./STD. PKG. Q421 = 25/125

SpecCheck



STARTING RECOMMENDATIONS

WATERPROOF LOAD RESISTANT	FAST CUT GENERAL FINISH	SLOW CUT FINE FINISH	MINIMUM CUT SUPER FINE FINISH
Screen-Bak Durite Q421	Metalite K225	Emery K622	Crocus K624

CLOTH SHEETS - COMPETITIVE CROSS REFERENCE

NORTON	3M	HERMES	KLINGSPOR	SIA	VSM
K224	311T Three-M-Ite BG 211K Electrocut	RB317LX	CS310X		KK504X
K225/K227	211K Three-M-Ite 311K Three-M-Ite	RB232J	KL361	2947J	KK504J KK504X
K622	011K Crystal Bay		KL371	C680J	
K624	001K Crystal Bay		KL371		KK14f/999
Q421	481W				

TechTips

Use light machine oil with cloth sheets as a lubricant for finer finishes and quicker cut.



It is the user's responsibility to refer to and comply with ANSI B7.1

CLOTH & PAPER SHEETS

PAPER SHEETS

Full size (9" x 11") and cut sheets are used for both metalworking and woodworking applications. Packed in protective dispensers and/or convenient contractor packs to eliminate waste and permit easy, neat storage.

Typical Applications

- Light duty, metal sanding
- Primer sanding, defect removal from painted surfaces
- Filler sanding
- Sanding and finishing of composites and fiberglass
- Bare wood sanding
- Sanding between sealer coats



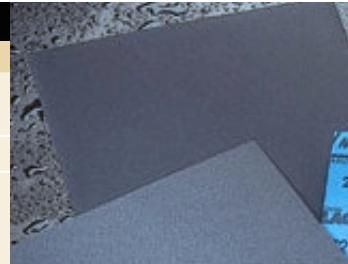
BEST No-Fil Champagne A275 – The performance leader for dry finishing

FEATURES	BENEFITS
• Premium P-graded, heat treated aluminum oxide abrasive	• Superior life, fast cut rate, consistent finish
• Unique fibre-reinforced, B-wt latex-saturated backing	• 50-60% improvement in tear strength • Flexible; can be used wet
• Water-based stearate, non-pigmented, No-Fil coating	• Provides maximum load resistance and extended life; no color transfer to work



BEST Black Ice Waterproof T402 – Ultimate surface finishes - wet

FEATURES	BENEFITS
• Premium, ultra fine (1000 - 2500 grits) silicon carbide abrasive	• Ultimate finish in wet applications
• Strong resin bond system	• Long life in wet applications
• A-wt waterproof paper backing design	• Ultimate flexibility • Wet-curl resistance • Environmentally stable; resists humidity-caused curling



BETTER NorZon Plus H875 – Excellent for soft material applications

FEATURES	BENEFITS
• Patented NorZon Plus zirconia abrasive	• Extended life over original NorZon products
• Strong E-wt paper, latex impregnated	• Increased durability and chip resistance, flexible
• Open coat design	• Reduced loading; ideal for body filler, fiberglass and composite sanding



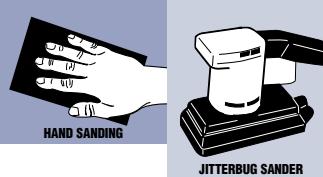
BETTER Blue-Bak Waterproof T414 – Exceptional finishing in wet applications

FEATURES	BENEFITS
• Sharp silicon carbide abrasive (220-600 grit range)	• Exceptional finishes in wet applications
• Strong resin bond	• Longer life in wet applications
• A-wt waterproof paper backing	• Extremely flexible • Improved wet-curl resistance • Environmentally stable; resists humidity-caused curling



CLOTH & PAPER SHEETS

PAPER SHEETS (CONTINUED)



GOOD Tufbak Waterproof T247 – For exceptional life - wet

FEATURES	BENEFITS
• Premium P-graded aluminum oxide grain	• Extended life
• P2000 grain	• For the ultra fine finish
• B-wt waterproof paper	• Excellent flexibility and tear-resistance



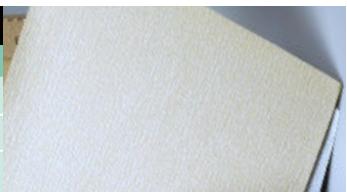
GOOD Tufbak Durite Waterproof T461 – For more aggressive applications

FEATURES	BENEFITS
• Silicon carbide abrasive	• Fast cutting with excellent finish in wet applications
• Strong, waterproof C-wt backing design	• Ideal for more aggressive applications • Environmentally stable, resists product curl in humidity • Resists chipping and cracking
• Advanced resin bond system	• Excellent flexibility and abrasive adhesion



GOOD No-Fil Adalox A251 – Unrivaled flexibility and finish - dry

FEATURES	BENEFITS
• P-grade aluminum oxide abrasive	• Increased life, consistent finish
• A-wt paper backing	• Increased flexibility for hand sanding applications
• Stearated (No-Fil), open coat	• Reduced loading



GOOD No-Fil Adalox A290 – Unrivaled durability and value for dry finishing

FEATURES	BENEFITS
• P-graded aluminum oxide abrasive	• Increased life, fast cut rate, consistent finish
• Heavy duty C-wt backing	• Edge-tear resistance, durable for cut sheet machine sanding applications
• Stearated (No-Fil), open coat	• Reduced loading



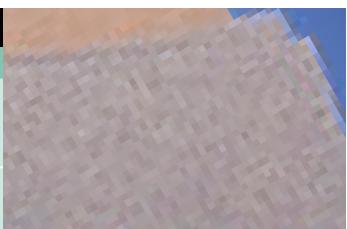
GOOD No-Fil Durite A413/A414 – Good general purpose choice

FEATURES	BENEFITS
• Sharp silicon carbide abrasive	• Excellent for finishing • Penetrates dense, hard materials (glass, ceramics, etc.)
• A413 – B-wt paper backing	• Flexible, yet durable
• A414 – A-wt paper backing	• Very flexible and conformable
• Stearated (No-Fil), open coat	• Reduced loading



GOOD Adalox A212, A213, A211 – For dry, general purpose sanding

FEATURES	BENEFITS
• Aluminum oxide grain, open-coat Available in three backing weights: A212 A-wt, A213 C-wt, A211 D-wt	• Aggressive cutting action for all dry sanding applications
• Extensive, P-graded grit range (P36 – P220 grit)	• Designed for heavy duty to light duty hand and machine sanding, coarse to fine



GOOD Garnet A511, A513, A514 – Ideal on soft woods

FEATURES	BENEFITS
• Natural garnet grain	• Excellent for soft woods, consistent finishes
• Available in three backing weights: A511 A-wt, A513 C-wt, A514 D-wt	• Designed for heavy duty to light duty hand and machine sanding, coarse to fine





PAPER SHEETS (CONTINUED)

SpecCheck



SPECIFICATION RECOMMENDATION CHART

MATERIAL	BEST PERFORMANCE	GENERAL DUTY
Unfinished Metal	A275	A251
Primed/Painted Surfaces	A275	A251
Fiberglass/Composites	A275, H875	A251, H290
Bare Wood	A275	A511, A513, A514
Clear Coat Sanding	T402	
Sealer Sanding	A275, A251	A413, A414
Lacquer Sanding	T402, T414	
Wet Sanding	T402, T414	T247, T461
Paint Stripping	A275, H875	A290, H290
Drywall Sanding	Q421	A412
All Purpose Dry Sanding		A24, A213, A211

RECOMMENDED GRIT SELECTION

ROUGHING TO INTERMEDIATE	INTERMEDIATE TO FINISHING	FINE FINISHING	ULTRA FINE FINISHING
36-80	80-240	240-400	400-2500

PAPER SHEETS COMPETITIVE CROSS REFERENCE

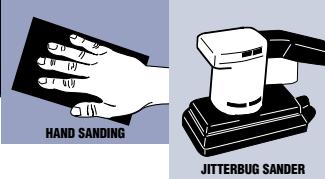
NORTON	3M	HERMES	KLINGSPOR	MIRKA	VSM
A211	230U, 240N, 346U				KP31C
A212	210N, 210U	HFB	PL31		
A213	230N	HFB	PL31		KP31B
A275	216U, 255L, 260L, 365L	HC133, HCAB	PS33	Q-Silver, Royal	—
A290	236U, 316U	HCAB	PS33, PL36	Bulldog Gold	KP911
A413	414N, 415N	PSF-LL, SA167	PL35	Carat(B)	CP131A
A511	110N				
A513	130N	GCAB			
A514	140N	GCAB			
H875	750U, 751U, 740I, 745I	—	—	Royal Coarse Cut	KP510E, KP709
T402	401Q	WSFlex18B	PS11	Waterproof (A)	CP918A
T414	413Q	WSFlex18B	PS11	Waterproof (A)	CP918A
T247	213Q		PS12		
T461	438Q, 431Q	WSFlex18C	PS11		CP918C

RECOMMENDED BACKING WEIGHT

	A-WT	B-WT	C-WT	D-WT	E-WT
Most Flexible/ Lightest Applications					Stiffest/Strongest Most Aggressive Applications

CLOTH & PAPER SHEETS

9 X 11 PAPER SHEETS



CLOTH & PAPER SHEETS

SIZE	GRIT	MIN./STD. PKG.	BEST		BETTER		GOOD									
			A275*	T402†	T414†		A211*	A213*	A212*	A514	A513	A511	A251*	A413	A414	T247†
UPC NO. (PREFIX 662611)																
9 X 11	36	25/125					00335			01575						
	40						00330			01570						
	50	50/250					00325			01565						01175
	60						00320			01560						01170
	80		31634				00315			01555	01505	84107	00801			
	100	100/500	31633				00295			01535	01500	84106	00800			01165*
	120		31632				00290			01530	01495	84105	00799			01160*
	150		31631				00285			01525	01490	84108	00802			01155*
	180		31630						00245		01489	84104	00803	34608		01150*
	220		31629		39367*				00240		01488	84103	00804	34606	26063*	
	240		31628		39366*						01487	84102	00805	34604	26062*	30331*
	280		31627		39365*						01486	84101		34602	26061*	
	320		31626		39364*						84100	00807	34600	26060*	30332*	
	360				39363*										26059*	30333*
	400		31624		39362*										26058*	
	500		31623		39361*										26057*	30334*
	600		31622		39360*										39347*	
	800		31621													
	1000	100/500	31620	39381*											26056*	
	1200		31619	39380*											26055*	
	1500		31618	39379*											26054*	
	2000			39378*											26053*	
	2500			39377*												

* P-GRADED

† WATERPROOF

* PACKAGING STANDARDS: T247, T402, T414, T461 = 50/250

EMERY SHEETS

EMERY GRIT	CAMI GRIT	MIN./STD. PKG.	GOOD	
			9 X 11 A621 UPC NO.	9 X 13-3/4 A621 UPC NO.
3	180	100/500	66261101267	66261101315*
2	220		66261101265	66261101310*
1	280		66261101263	66261101300*
0	500		66261101261	66261101290*
2/0	600		66261101260	66261101285*
3/0	1000		66261101259	66261101280*
4/0	1200		66261101258	66261101275*

*PACKAGING STANDARDS: MIN. PKG./STD. PKG. = 100/1000

RUBBER HAND SANDING BLOCK

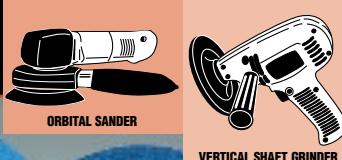
A resilient rubber block that conforms well to mild contours and flat surfaces. 3-2/3" x 9" sheets are securely held by slotted "jaws" at each end of the block to permit quick, easy sheet changes.



SIZE	STD. PKG.	UPC. NO.
3-2/3 X 9	14	07660743140



CLOTH PSA DISCS AND ACCESSORIES



Norton cloth PSA (pressure sensitive adhesive) individual discs and disc rolls are ideal for all maintenance and repair applications, from medium grinding to light deburring.

Typical Applications

- Light to medium pressure grinding
- Blending, leveling and finishing applications
- For use on contours or flat surfaces



BEST Norton SG R938 – Ideal for demanding cloth applications

FEATURES	BENEFITS
• Patented, P-graded Norton SG ceramic aluminum oxide grain	• Maximum life; rapid, cool cutting; consistent finishes • Ideal for flash and seam removal on molded parts and a broad range of non-ferrous metalworking and woodworking applications
• Strong, semi-flexible X-wt cotton cloth backing	• Durable; resistant to heat
• All resin bond	• Provides excellent grain retention and load resistance
• DL (dustless) anti-static	• Cleaner workpiece and equipment



BEST CORA SY692 – Ideal for flash removal

FEATURES	BENEFITS
• Tough, durable zirconia abrasive	• Fast, aggressive, cool cut with extended life
• Full phenolic resin bond system with enhanced grain adhesion	• Minimizes edge wear, increases life
• Heavy duty, Y-wt polyester backing	• Reduces edge wear and grain shedding



BETTER NorZon Plus R821 – The choice for grinding and deburring stainless steel

FEATURES	BENEFITS
• Self-sharpening, zirconia alumina abrasive	• Cooler cut, extended life over competitive zirconia alumina products
• Heavy Y-wt backing	• Durable; reduced edge wear



GOOD Metalite R228 – Metalworking, versatile

FEATURES	BENEFITS
• Premium aluminum oxide abrasive	• Long life
• Heavy, X-wt cotton backing	• Durable • Ideal for aggressive stock removal applications • Resistant to heat

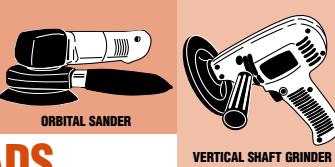


GOOD CORA KJ370 - Ideal for dimensioning and finishing of contours

FEATURES	BENEFITS
• P-graded heat-treated, aluminum oxide abrasive	• Excellent cut rate; long life
• Resin bond system	• Increased strength and durability • Produces fine finishes on soft metals and wood
• Flexible J-wt backing	• Provides flexibility needed for contouring while maintaining grain adhesion • Designed for intermediate / light pressure dry sanding



CLOTH PSA DISCS AND ACCESSORIES



SMALL DIAMETER CLOTH PSA DISCS – FIT PSA BACK-UP PADS

METALITE R228 SMALL DIAMETER CLOTH PSA DISCS

SIZE	MIN./ STD. PKG.	GOOD									
		36 GRIT	40 GRIT	50 GRIT	60 GRIT	80 GRIT	100 GRIT	120 GRIT	150 GRIT	180 GRIT	220 GRIT
UPC NO. (PREFIX 662611)											
2	50/500			36530	36525	36520	36517	36515			
3	50/500	36565	36563	36562	36560	36555	36552				
5	50/250	36589	36588	36587	36586	36585	36584	36583	36582	36581	
6	50/250				36596	36595	36594	36593		36592	
8	50/250	36350	36351	36352	36576	36354		36355			

INDIVIDUAL CLOTH PSA TABBED DISCS

Pressure Sensitive Adhesive makes for easy application and removal.

SIZE	GRIT	MIN./ STD. PKG.	BEST		GOOD
			PSA R938*	PSA SY692	PSA KJ370*
5	50	50/250		66623356576	
	60			66623356685	
	80		66261139832	66623356686	66623351358
	100		66261139833		66623351359
	120		66261139834		66623351360
	150		66261139835		66623351361
	180		66261139836		66623351362
	220				66623351363

*P-GRADED



CLOTH PSA DISC ROLLS – FIT PSA BACK-UP PADS

SIZE	STD. PKG./ DISCS PER ROLL	SPEC	GOOD									
			50 GRIT	60 GRIT	80 GRIT	100 GRIT	120 GRIT	150 GRIT	180 GRIT	220 GRIT		
UPC NO. (PREFIX 662611)												
5	4/100	METALITE R228	33252	33253	33254	33255						
UPC NO. (PREFIX 666233)												
5	4/100	CORA KJ370*			50228	50229	50230	50231	50232	50233		

*P-GRADED, TABBED DISCS
SEE PAGE 62 FOR DISC ROLL DISPENSERS

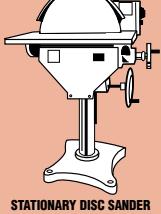
BACK-UP PADS FOR CLOTH PSA DISCS

DESCRIPTION	STD. PKG.	MAX. RPM	UPC NO.
2" DIAMETER	10	12,500	63642543095
3" DIAMETER	10	8,000	63642543100
5" DIAMETER - SOFT	5	12,000	63642503087
5" DIAMETER - FIRM	5	12,000	63642503605
5" DIAMETER TAPERED	5	10,000	63642503112
6" DIAMETER	5	10,000	63642543852
8" DIAMETER	5	6,000	63642543112

FOR ADDITIONAL BACK-UP PADS SEE PAGES 62-63



CLOTH PSA DISCS AND ACCESSORIES



LARGE DIAMETER CLOTH PSA DISCS

Used on stationary disc machines for dimensioning and finishing metal workpieces. A pressure sensitive adhesive offers fast, convenient mounting. Made without center holes for full-face usage.

NORZON PLUS R821 LARGE DIAMETER CLOTH PSA DISCS

SIZE	MIN./STD. PKG.	BETTER					
		24 GRIT	36 GRIT	40 GRIT	50 GRIT	60 GRIT	80 GRIT
UPC NO. (PREFIX 662611)							
10	25/50			38314		38316	38317
12	25/50		38318	38319	38320	38321	38322
16	25/50				38333	38334	09129
18	25/50		38337				
20	25/50			38343	38344	38346	38397

METALITE R228 LARGE DIAMETER CLOTH PSA DISCS

SIZE	MIN./STD. PKG.	GOOD						
		36 GRIT	40 GRIT	50 GRIT	60 GRIT	80 GRIT	100 GRIT	120 GRIT
UPC NO. (PREFIX 662611)								
10	25/50	36606	36604	36607	36602	36601	36600	
12	25/50	36635	36630	36625	36620	36615	36614	36613
15	25/50	36666	36665	36714	36663	36662		
16	25/50	36700	36685	36684	36683	36701		
18	25/50	36720			36696	36723		
20	25/50	36710	36709	36711	36712	36706		
24	10/10	36718	36717	36725	36726	36727		



FILM AND WATERPROOF PAPER DISCS



Norton film discs are made with a high strength polyester film backing and micron-graded aluminum oxide grain for fast cutting and consistent finish to help you achieve superior finishing of acrylic solid surfaces. They are available in PSA (pressure sensitive adhesive) discs and convenient Speed-Grip (hook and loop) discs.

Norton silicon carbide waterproof discs create exceptional finishes on wet applications.

Typical Applications

- Seam blending
- Surface refinishing
- Surface finish improvement



FILM AND WATERPROOF PAPER DISCS

BEST No-Fil Microfinishing Film Q130 – The choice for solid surface applications

FEATURES	BENEFITS
• Premium, micron-graded aluminum oxide grain	• High cut rate - for leveling; high quality finish with finer grits • Generates a very uniform surface
• Extremely uniform 3ml film backing (substrate)	• Generates a superior finish • Increased tear resistance • Can be used wet
• Stearated (No-Fil); open coat	• Reduced loading; extended life with better finish

EXPANDED OFFERING



BEST Polyester Film Q132 – For clear-coat repair applications

FEATURES	BENEFITS
• Premium aluminum oxide abrasive	• Fast cut and extended life
• 7 and 9 micron-graded abrasive grain particles	• Provide very fine finish
• Polyester film backing	• Very flexible and tear-resistant • Smoothest surface for best finish • Can be used wet
• Special resin bond system	• Reduced loading - resulting in longer life

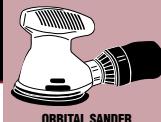
BEST Black Ice T402 – For clear-coat repair applications wet

FEATURES	BENEFITS
• Premium, ultra fine (2000 and 2500 grits) silicon carbide abrasives	• Best finish in wet clear-coat repair applications
• Advanced resin bond system	• Longer life in wet applications
• Advanced A-wt waterproof paper backing design	• Ultimate flexibility and waterproof performance

GOOD Tufbak Durite T461 – For exceptional surface finishes (wet)

FEATURES	BENEFITS
• Silicon carbide abrasive	• Best finish in wet applications
• Advanced resin bond system	• Increased flexibility and abrasive adhesion
• Waterproof C-wt backing design	• Environmentally stable, resists product curl in humidity • Resists chipping and cracking

FILM AND WATERPROOF PAPER DISCS



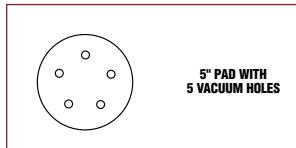
FILM AND WATERPROOF PAPER DISCS

SPEED-GRIP FILM AND WATERPROOF PAPER DISCS

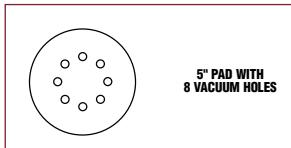
BEST				
SIZE	GRIT	MIN./STD. PKG.	Q130† UPC NO.	T402† UPC NO.
1-1/4	2000 2500	1000/10,000		66261141642 66261142294
1-3/8	2000 2500	1000/10,000		66261142295 66261142296
5"	100 MIC 80 MIC 60 MIC 40 MIC 30 MIC 15 MIC 9 MIC	50/200	66261147182 66261147183 66261147184 66261147185 66261147186 66261147187 66261147188	
5" X 5 HOLE VAC DIE 3328	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261143003 66261143004 66261143005 66261143006 66261143007	
5" X 8 HOLE VAC DIE 3392	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261143008 66261143009 66261143010 66261143011 66261143012	
6"	100 MIC 80 MIC 60 MIC 40 MIC 30 MIC 15 MIC 9 MIC	50/200	66261147191 66261147192 66261147193 66261147194 66261147195 66261147196 66261147197	
6" X 6 HOLE VAC DIE 3371	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261143013 66261143014 66261143015 66261143016 66261143017	
6" X 8" HOLE VAC (FEIN) DIE 3391	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261145059 66261145060 66261145061 66261145062 66261145063	
6" X 8 HOLE VAC DIE 3408-2A	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261143018 66261143019 66261143020 66261143021 66261143022	
6" X 8 HOLE W/CTR. VAC HOLE (FESTO) DIE 3408-1	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261143023 66261143024 66261143025 66261143026 66261143027	
8" X 16 HOLE (FEIN) DIE 3478	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261143028 66261143029 66261143030 66261143031 66261143032	
11-1/4" BLANK	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	25/50	66261143033 66261143034 66261143035 66261143036 66261143037	

† WATERPROOF

DIE 3328



DIE 3392



PSA INDIVIDUAL FILM DISCS

BEST				
SIZE	GRIT	MIN./STD. PKG.	Q130† PSA UPC NO.	T402† PSA UPC NO.
5" BLANK	100 MIC 80 MIC 60 MIC 40 MIC 30 MIC 15 MIC 9 MIC	50/200	66261145993 66261145994 66261145995 66261145996 66261145997 66261145998 66261145999	
5" X 5 HOLE VAC DIE 3328	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261142993 66261142994 66261142995 66261142996 66261142997	
6" BLANK	100 MIC 80 MIC 60 MIC 40 MIC 30 MIC 15 MIC 9 MIC	50/200	66261147198 66261147199 66261147200 66261147201 66261147202 66261147203 66261147204	
6" X 6 HOLE VAC DIE 3371	100 MIC 60 MIC 30 MIC 15 MIC 9 MIC	50/200	66261142998 66261142999 66261143000 66261143001 66261143002	

INDIVIDUAL WATERPROOF PAPER DISCS

GOOD				
SIZE	GRIT	MIN./STD. PKG.	T461† UPC NO.	
8"	400 600	100/500	66261127483 66261127484	
12"	240 320 400 600	50/100	66261133338 66261133339 66261127481 66261127482	

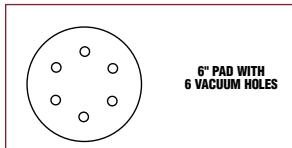
† WATERPROOF

PSA FILM AND WATERPROOF PAPER DISC ROLLS

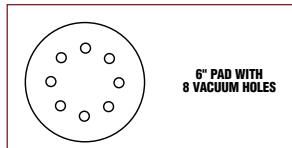
BEST				
SIZE	GRIT	MIN./STD. PKG.	Q132† UPC NO.	T402† UPC NO.
1-3/8	7 MIC 9 MIC 2000 2500	4/1000	66261139349 66261139348	66261139351 66261139350

† WATERPROOF
Q132 AND T402 ARE ROSETTE DISCS

DIE 3371



DIE 3391





ORBITAL SANDER

SpecCheck

RECOMMENDED SOLID SURFACE SANDING SEQUENCE – FOR ACRYLIC SOLID SURFACE

OPTION 1: STARTING WITH NO-FIL MICROFINISHING FILM Q130

	MATTE FINISH	SEMI-GLOSS FINISH	HIGH-GLOSS FINISH
Step 1	Q130 - 100µ with a low profile soft density pad	Q130 - 100µ with a low profile soft density pad	Q130 - 100µ with a low profile soft density pad
Step 2	Q130 - 60µ with a low profile soft density pad	Q130 - 60µ with a low profile soft density pad	Q130 - 60µ with a low profile soft density pad
Step 3	Bear-Tex A/O VF finishing disc/hand pad (maroon)	Q130 - 30µ with a low profile soft density pad	Q130 - 30µ with a low profile soft density pad
Step 4	Bear-Tex S/C MF Micro-finishing disc/hand pad (gray)	Bear-Tex S/C MF Micro-finishing disc/hand pad (gray)	Q130 - 15µ with a low profile soft density pad
Step 5			Q130 - 9µ with a low profile soft density pad
Step 6 Optional			Bear-Tex S/C MF Micro-finishing disc/hand pad (gray) or Bear-Tex Non-abrasive polishing disc/hand pad (white)
Step 7 Optional			Quick-Buff Gray Compound with black lambswool polishing pad

OPTION 2: STARTING WITH NO-FIL CHAMPAGNE A275 PAPER PRODUCTS

	MATTE FINISH	SEMI-GLOSS FINISH	HIGH-GLOSS FINISH
Step 1	A275* - P120 with a low profile soft density pad	A275* - P120 with a low profile soft density pad	A275* - P120 with a low profile soft density pad
Step 2	A275 - P180 with a low profile soft density pad	A275 - P180 with a low profile soft density pad	A275 - P320/400 with a low profile soft density pad
Step 3	Bear-Tex A/O VF finishing disc/hand pad (maroon)	A275 - P320 with a low profile soft density pad	A275 - P600/P800 with a low profile soft density pad
Step 4	Bear-Tex S/C MF Micro-finishing disc/hand pad (gray)	Bear-Tex S/C MF Micro-finishing disc/hand pad (gray)	A275 - P1200 with a low profile soft density pad
Step 5			Bear-Tex S/C MF Micro-finishing disc/hand pad (gray) or Bear-Tex Non-abrasive polishing disc/hand pad (white)
Step 6 Optional			Quick-Buff Gray Compound with black lambswool polishing pad

* FOR LONGER LIFE USE P120 GRIT NO-FIL NORTON SG A975 PAPER DISCS.

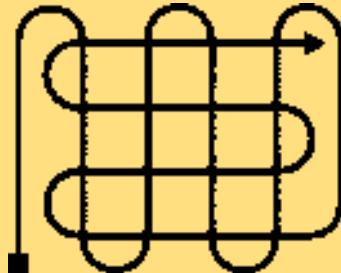
Tech Tips

- To reduce the chance of swirl marks or an uneven scratch pattern on the surface, ensure the sander's pad face is clean before attaching the disc. Air powered sanders require sufficient air supply to maintain tool speed during use. Proper air hose and coupling size are essential.
- Place disc sanders flat on surface to be sanded, before you start sanding. When removing the sander from the workpiece, smoothly pull the operating sander off the edge of the work.
- Wipe the surface to remove debris between sanding steps to minimize contamination and abrasive particle scratches.

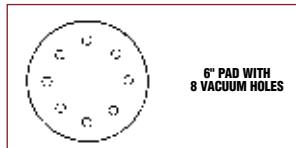


It is the user's responsibility to refer to and comply with ANSI B7.1

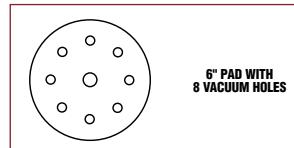
- Use the following sanding pattern outlined to ensure a consistent finish.



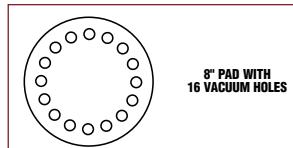
DIE 3408-2A



DIE 3408-1



DIE 3478



See Paper Discs and Accessories on pages 62 - 64 for Back-up Pads

ABRASIVE SPONGES



HAND SANDING

Flexible, abrasive sanding sponges for a wide variety of wood, metal, paint, plastic, ceramics and drywall, curved, contoured or flat surface applications.

Typical Applications

- Light stock removal
- Sanding sealer and wash-coats
- Touch-up or repair of primer
- Sanding contours, intricate shapes
- Finishing



GOOD		Abrasive Sponges		
FEATURES		BENEFITS		
• Durable abrasive-coated foam		• Lasts up to 5X longer than sandpaper		
• Tear-resistant				
• Easily conform to shapes and contours		• Can reach areas inaccessible to sandpaper sheets		
• Washable		• Reusable; long life		

SIZE W X L X T	GRIT	STD. PKG. (SPONGES/ CASE)	GOOD	
			DESCRIPTION	UPC NO.
FLEXIBLE ABRASIVE SPONGES				
3 X 4 X 1/2	60 COARSE	108	BULK PACK	07660701110
	100 MEDIUM	108	BULK PACK	07660700950
	150 FINE	108	BULK PACK	07660700949
	ASSORTED	30	BULK PACK*	07660701885

SMALL AREA GENERAL PURPOSE SPONGES

4 X 2-3/4 X 1	36/80 CRS/MED	24	CONTRACTOR PACK	07660749505
	80/80 MED/MED	24	CONTRACTOR PACK	07660749507
	80/120 MED/FINE	24	CONTRACTOR PACK	07660749504
	120/120 FINE/FINE	24	CONTRACTOR PACK	07660749506

CONTOUR SINGLE SIDED SPONGES

4-1/2 X 5-1/2 X 3/16	100 MEDIUM	100	BULK PACK	07660702257
	150 FINE	100	BULK PACK	07660702256
	220 EXTRA FINE	100	BULK PACK	07660702255

SEALER SANDING

4-3/4 X 3-3/4 X 1/2	EXTRA COARSE	250	BULK PACK	63642502538
	COARSE	250	BULK PACK	63642552870
	MEDIUM	250	BULK PACK	63642552869
	FINE	250	BULK PACK	63642552868

NOTE: ORDERS FOR SANDING SPONGES SHOULD BE EXPRESSED PER SPONGE - NOT PER PACK OR CASE
EXAMPLE: TO ORDER A CASE OF FLEXIBLE ABRASIVE SPONGES, ORDER 108 SPONGES.

* ASSORTED CONTAINS 3 PADS PER SET (1 COARSE, 1 MEDIUM, 1 FINE)

SpecCheck



APPLICATION INFORMATION

Flexible: economical, fabric-backed foam for sanding a variety of materials; coated 1 side.

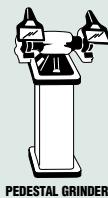
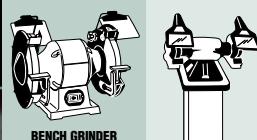
Small Area General Purpose: for a wide variety of materials and sanding applications where flexibility is needed; coated 4 sides.

Contour Single-sided: thin, flexible; for sanding small diameters and contours such as ceramics, spindles, turnings and railings; coated 1 side.

Sealer Sanding: very flexible; silicon carbide abrasive for sanding primers, sealers and between coats on furniture and cabinets; coated 2 sides.

BENCH AND PEDESTAL WHEELS

The new Norton Bench and Pedestal wheel line encompasses three tiers and two abrasives – to answer all your deburring, shaping and sharpening needs: aluminum oxide for high speed tool steels and other metals and silicon carbide for non-ferrous metals



BEST Premium White



FEATURES BENEFITS

- White aluminum oxide in a premium vitrified bond
- Maximum cut rate and cool cutting action on hardened or high-speed tool steels
- Each wheel contains a nested bushing
- Accommodates a wide variety of standard arbor sizes

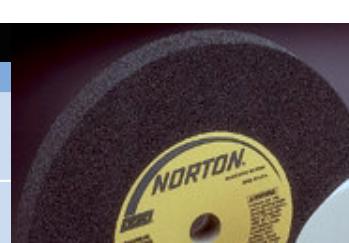


BETTER 57A and 39C/37C Engineered



FEATURES BENEFITS

- High quality aluminum oxide and silicon carbide abrasive in a premium vitrified bond system
- Precision engineered to maximize cut rate, finish and wheel life
- Each wheel contains a nested bushing
- Accommodates a wide variety of standard arbor sizes



GOOD Gemini Aluminum Oxide and Silicon Carbide



FEATURES BENEFITS

- Quality, gray aluminum oxide for metal and sharp, green silicon carbide for non-ferrous applications
- Economical prices; ideal for small job shops and numerous general purpose applications
- Each wheel contains a nested bushing
- Accommodates a wide variety of standard arbor sizes

BENCH AND PEDESTAL WHEEL ARBOR BUSHINGS

ARBOR BUSHINGS

WHEEL DIAMETER	WHEEL CENTER HOLE	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
6"	1"	•	•	•	•		
7"	1"	•	•	•	•		
8"	1"		•	•	•		
10"	1-1/4"			•	•	•	
10" X 2"	1-1/4"					•	
12"	1-1/4"			•	•	•	
12"	1-1/2"					•	•
14"	1-1/4"					•	•
14"	1-1/2"					•	•

THESE SIZE BUSHINGS SHIPPED FREE OF CHARGE WITH YOUR WHEEL ORDER.

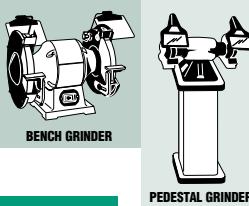
SpecCheck



GRIT SELECTION GUIDE

SPEC (FINISH)	GRIT A/O (STEEL)	GRIT S/C (NON-STEEL)	STOCK REMOVAL
Very Coarse	24 Grit		Heavy
Coarse	36/46 Grit	—	
Medium	60/80 Grit	60 Grit	
Fine	100/120 Grit	80 Grit	
Very Fine	150 Grit	—	
Extra Fine		120 Grit	Light

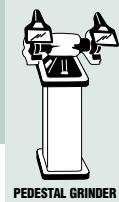
BENCH AND PEDESTAL WHEELS



ALUMINUM OXIDE BENCH AND PEDESTAL WHEELS FOR STEEL APPLICATIONS

SIZE D X T X H	MAX. RPM	STD. PKG.	BEST		BETTER		STD. PKG.	GOOD	
			PREMIUM WHITE ALUMUNDUM SPEC	UPC NO.	SPEC	57A UPC NO.		GEMINI SPEC.	UPC NO.
TYPE 01 STRAIGHT									
5 x 1/2 x 1	4,965						1/1	Medium	66252830649
6 x 1/2 x 1	4,140						1/1	Coarse Medium Fine	66252836132 66252836131 66252836133
6 x 3/4 x 1	4,140	1/10	Medium 60 Fine 100 Very Fine 150	07660788246 07660788247 07660788248	57A46-MVBE	66252825495	1/1	Coarse Medium Fine	66252837103 66252837102 66252837101
6 x 1 x 1	3,600	1/10	Medium 60 Fine 100 Very Fine 150	07660788261 07660788262 07660788263			1/1	Coarse Medium Fine	66252837958 66252837957 66252837100
7 x 1 x 1	3,600	1/10			57A46-KVBE 57A46-MVBE 57A60-MVBE	66252916248 66252916249 66252916250	1/1	Coarse Medium Fine	66252942292 66252942294 66252942295
8 x 3/4 x 1	3,600						1/1	Coarse Medium Fine	66253042315 66253042316 66253042317
8 x 1 x 1	3,600	1/10	Medium 60 Fine 100 Very Fine 150	07660788281 07660788282 07660788283			1/1	Very Coarse Coarse Medium Fine	66253044454 66253044449 66253044448 66253044447
10 x 1 x 1-1/4	2,485	1/1			57A36-OVBE 57A46-MVBE 57A60-MVBE 57A60-OVBE	66253116275 66253116274 66253116273 66253116276	1/1	Very Coarse Coarse Medium Fine	66253160788 66253160787 66253160789 66253160350
10 x 1-1/4 x 1-1/4	2,485	1/1			57A36-MVBE 57A46-MVBE 57A60-MVBE	66253116277 66253116278 66253116279	1/1	Coarse Medium	66253161250 66253161251
10 x 1-1/2 x 1-1/4	2,485	1/1			57A46-MVBE	66253116280	1/1	Coarse Medium	66253161393 66253161395
10 x 2 x 1-1/4	2,485	1/1			57A36-OVBE	66253116281			
12 x 1 x 1-1/4	2,070	1/1			57A46-MVBE	66253220947			
12 x 1-1/2 x 1-1/2	2,070	1/1			57A36-OVBE	66253220948	1/1	Coarse Medium	66253263052 66253263053
12 x 2 x 1-1/2	2,070	1/1			57A24-OVBE 57A24-QVBE 57A30-MVBE 57A36-OVBE 57A46-MVBE 57A46-OVBE 57A60-MVBE	66253220949 66253220950 66253220951 66253220952 66253220953 66253220954 66253220955	1/1	Very Coarse Coarse Medium	66253263054 66253263055 66253263056
14 x 2 x 1-1/2	1,800	1/1			57A24-QVBE 57A36-OVBE 57A46-MVBE	66253319972 66253319973 66253319974			
14 x 2-1/2 x 1-1/4	1,800	1/1			57A24-QVBE 57A46-MVBE	66253319976 66253319975			
14 x 3 x 1-1/4	1,800	1/1			57A36-OVBE	66253319977			

BENCH AND PEDESTAL WHEELS



SILICON CARBIDE BENCH AND PEDESTAL WHEELS FOR NON-STEEL APPLICATIONS

SIZE D X T X H	MAX. RPM	STD. PKG.	BETTER		STD. PKG.	GOOD	
			SPEC	39C/37C UPC NO.		SPEC	GEMINI UPC NO.
TYPE 01 STRAIGHT							
6 x 1/2 x 1	4,140				1/1	Medium Fine Extra Fine	66252836571 66252836572 66252836573
6 x 3/4 x 1	4,140	1/10	39C60-IVK	66252825493	1/1	Medium Fine Extra Fine	66252837190 66252837191 66252837192
6 x 1 x 1	4,140				1/1	Medium Fine Extra Fine	66252837187 66252837193 66252837194
7 x 3/4 x 1	3,600	1/10	39C60-IVK	66252916246			
7 x 1 x 1	3,600				1/1	Medium Fine Extra Fine	66252942300 66252942301 66252942302
8 x 1 x 1	3,600				1/1	Medium Fine Extra Fine	66253044087 66253044534 66253044535
10 x 1 x 1-1/4	2,485	1/1	39C60-IVK 39C60-JVK 39C60-KVK 39C80-IVK	66253116262 66253116263 66253116261 66253116264	1/1	Medium Fine	66253144536 66253160366
10 x 1-1/2 x 1-1/4	2,485	1/1	39C60-IVK	66253116265			
12 x 2 x 1-1/4	2,070				1/1	Medium Fine	66253263359 66253263360
12 x 2 x 1-1/2	2,070	1/1	39C60-KVK	66253220942			
14 x 2 x 1-1/2	1,800	1/1	37C24-RVK	66253319967			

Spec Check

STARTING RECOMMENDATION FOR TRUING & DRESSING NORTON TOOLROOM WHEELS

Truing & Dressing: Dressing Stick Starting Recommendation

HIGH PERFORMANCE SPEC	UPC NO.	CONVENTIONAL SPEC	UPC NO.
3/16 x 1/2 x 3" Norbide	61463610148	1 x 1 x 6" 37C24-SVK	61463619462
3/16 x 7/16 x 3" Boron Carbide	61463629427	1 x 1 x 8" 37C24-SVK	61463610471

Other sizes are available

Dressing: Single Point Dressing Tool Starting Recommendation

WHEEL ABRASIVE TYPE: WHEEL SIZES	TOOL SHANK DIAMETER	SILICON CARBIDE TOOL SPEC	UPC NO.	ALUMINUM OXIDE TOOL SPEC UPC NO.
Up to 7"	3/8 7/16	BCSG2M6 BCSG2M7	66260157007 66260156905	BC2M6 BC2M7
8" to 10"	3/8 7/16	BCSG3M6 BCSG3M7	66260157008 66260156906	BC3M6 BC3M7
12" to 14"	3/8 7/16	BCSG5M6 BCSG5M7	66260157009 66260156907	BC5M6 BC5M7

These tools are a standard recommendation; see the "Diamond Tool" section for additional tools.

CUT-OFF WHEELS

This cut-off product line provides premium performance in all cut-off applications covering all portable and stationary machines.

Typical Applications

- Cutting sheet metal
- Cutting pipe
- Foundry/Forge shops - gate/riser removal, cutting forgings
- Metal plate dimensioning
- Ship building – metal fabrication
- Toolroom – cutting drill bits, steel bar, tubing, metallurgical sectioning
- Construction – concrete/masonry work

Product Offering

- Portable grinder small diameter (1-1/2" – 6")
- Right angle grinder (4" – 9")
- Circular saw (5-3/8"- 8")
- High speed gas/electric saw (12" – 16")
- High speed walk-behind road saw (14", 18")
- Rail Cut (14", 16")
- Stationary machine large diameter (10" – 24")
- Chop saw (10" – 16")



SMALL DIAMETER REINFORCED CUT-OFF (1-1/2" – 6")

BEST	NORZON The Absolute Force Reinforced Cut-off Wheels – Fastest initial cut rate	
FEATURES	BENEFITS	
• Patented Norton SG (ceramic alumina) / NorZon (zirconia alumina) grain combination	• Fastest initial cut of any wheel; highest productivity	
• Highly advanced bond system	• Free, cool cut	
• State-of-the-art manufacturing	• Superior wheel balance	
• NORZON The Absolute Force Free Cut	• Up to 3X life over aluminum oxide wheels on carbon steel and cast iron • 40% faster cut rate over standard aluminum oxide wheels	
• NORZON The Absolute Force Long Life	• Up to 5X life on stainless steel and exotic metals	

BETTER	Charger Reinforced Cut-off Wheels – Versatile; ideal for stainless steel	
FEATURES	BENEFITS	
• A unique blend of premium NorZon (zirconia alumina) and aluminum oxide	• 2X the life of aluminum oxide wheels • Free cutting • Effectively cuts a variety of metals from alloys and stainless to gray iron • Long life and economical performance to price ratio lower total cost • Superior product at a value price	



CUT-OFF WHEELS

CUT-OFF WHEELS

BETTER	Small Diameter Engineered Reinforced Cut-off Wheels – Precision, thin cut	
FEATURES	BENEFITS	
ALUMINUM OXIDE – OBNA2 BOND WHEELS		
• Side reinforced, resin bond	• Yield maximum cut rate and minimum kerf loss; ideal when thin cut is desired	

ALUMINUM OXIDE – B25N BOND		
• Constructed with full diameter side reinforcing; resin bond	• Versatile: durable, free cutting; offer greatest stiffness	



GOOD	Gemini Reinforced Cut-off Wheels – All purpose wheels, competitively priced	
FEATURES	BENEFITS	
• Advanced formulation	• Free cutting • Maximizes the performance of conventional aluminum oxide abrasive	
• Gemini Free Cut wheels	• Engineered to cut hard materials	
• Gemini Long Life wheels	• Excellent life and cut rate	



SIZE <i>D X T X H</i>	MAX. RPM	STD. PKG.	NORZON THE ABSOLUTE FORCE SPEC.	UPC NO.	BEST	BETTER	GOOD
							GEMINI UPC NO.
TYPE 41 FLAT CUTTING-OFF							
1-1/2 X .035 X 1/16	40,745	25		A60-OBNA2	66243427764		
1-1/2 X .035 X 1/8	40,745	25		A60-OBNA2	66243427831		
1-1/2 X .035 X 1/4	40,745	25		A60-OBNA2	66243427875		
1-1/2 X .060 X 1/8	40,745	25		A60-OBNA2	66243427876		
2 X .035 X 1/8	30,560	25		A60-OBNA2	66243428020	FREE CUT	66243411392
2 X .035 X 1/4	30,560	25		A60-OBNA2	66243428014	FREE CUT	66243411393
2 X .035 X 3/8	30,560	25				FREE CUT	66243411394
2 X .060 X 1/8	30,560	25		A60-OBNA2	66243428041		
2 X .060 X 1/4	30,560	25		A60-OBNA2	66243427993		
2 X 1/16 X 1/4	30,560	25				FREE CUT	66243411395
2 X 1/16 X 3/8	30,560	25				FREE CUT	66243411396
2 X 1/8 X 1/4	30,560	25				FREE CUT	66243411402
2 X 1/8 X 3/8	30,560	25				FREE CUT	66243411403
2-1/2 X .035 X 1/8	30,560	25		A60-OBNA2	66243528476		
2-1/2 X .035 X 1/4	30,560	25		A60-OBNA2	66243528425		
2-1/2 X 1/16 X 1/4	30,560	25				FREE CUT	66243510640
2-1/2 X 1/16 X 3/8	30,560	25		57A701-TB25N	66243522372	FREE CUT	66243510641
3 X .035 X 1/4	25,465	25	66243510668	A60-OBNA2	66243528573	FREE CUT	66243510627
3 X .035 X 3/8	25,465	25	66243510669	23A601-QBNA2 A60-OBNA2 CHARGER	66243528629 66243528574 66243527753	FREE CUT	66243510628
3 X .060 X 1/4	25,465	25		A60-OBNA2	66243528471		
3 X .060 X 3/8	25,465	25		A60-OBNA2	66243528552		
3 X 1/16 X 1/4	25,465	25	FREE CUT LONG LIFE	66243510670 66243510834	57A364-TB25N 57A601-TB25N	FREE CUT LONG LIFE	66243510645 66243510649
3 X 1/16 X 3/8	25,465	25	FREE CUT LONG LIFE	66243510671 66243510835	57A364-TB25N 57A601-TB25N U57A364-VB25N CHARGER	FREE CUT LONG LIFE	66243510647 66243510648

CUT-OFF WHEELS



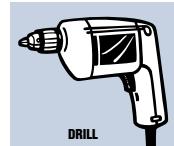
SIZE D X T X H	MAX. RPM	STD. PKG.	BEST		BETTER		GOOD	
			NORZON THE ABSOLUTE FORCE SPEC.	UPC NO.		UPC NO.	SPEC	GEMINI UPC NO.
TYPE 41 FLAT CUTTING-OFF								
3 X 1/16 X 3/8 CONTRACTOR 5 PACK	25,465	25*					METAL FREE CUT	07660747767
3 X 1/8 X 1/4	25,465	25	FREE CUT	66243510672			FREE CUT LONG LIFE	66243510650 66243510652
3 X 1/8 X 3/8	25,465	25	FREE CUT LONG LIFE	66243510673 66243510837			FREE CUT LONG LIFE	66243510651 66243510653
4 X .035 X 1/4	19,100	25		66243510674	A60-OBNA2	66243529606	FREE CUT	66243510629
4 X .035 X 3/8	19,100	25		66243510675	A60-OBNA2 CHARGER	66243529621 66243527340	FREE CUT	66243510630
4 X .035 X 1/2	19,100	25			A60-OBNA2	66243529622		
4 X .035 X 3/4	19,100	25			A60-OBNA2	66243529609		
4 X .040 X 3/8	19,100	25			A60-OBNA2	66243529516		
4 X .060 X 3/8	19,100	25			A60-OBNA2	66243529604		
4 X 1/16 X 1/4	19,100	25	FREE CUT	66243510676			FREE CUT	66243510654
4 X 1/16 X 3/8	19,100	25	FREE CUT LONG LIFE	66243510677 66243510839	57A364-TB25N 57A461-TB25N CHARGER U57A364-TB65N U57A364-VB25N	66243522500 66243522501 66243527338 66243517454 66243529594	FREE CUT LONG LIFE	66243510655 66243510657
4 X 1/16 X 1/2	19,100	25			57A364-TB25N	66243522502		
4 X 1/8 X 1/4	19,100	25					FREE CUT	66243510658
4 X 1/8 X 3/8	19,100	25	FREE CUT LONG LIFE	66243510680 66243510841	57A364-TB25N CHARGER	66243522505 66243527339	FREE CUT LONG LIFE	66243510659 66243510661
5 X .035 X 3/8	12,225	25			A60-OBNA2	66252830653		
6 X .035 X 3/8	10,190	25			A60-OBNA2	66252835064		

*5 WHEELS PER CONTRACTOR PACK, 5 CONTRACTOR PACKS PER STANDARD PACKAGE



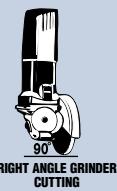
DRILL MOUNT MANDREL FOR 2" – 3" CUT-OFF WHEELS

This mandrel is used to safely mount 2" – 3" diameter cut-off wheels with 3/8" arbor holes on to a drill.



STD. PKG.	SPEC.	UPC NO.
5	DRILL-MOUNT MANDREL FOR 2" AND 3" CUT-OFF WHEELS	07660747769

CUT-OFF WHEELS



RIGHT ANGLE GRINDER REINFORCED CUT-OFF WHEELS - TYPE 41 (4" – 7") AND TYPE 42 (4-1/2" – 9")

Right Angle Grinder Reinforced Cut-off Wheels

FEATURES	BENEFITS
• Unique reinforcement design	• Provides safety, strength and straight cuts
• Extra thin	• Quick cutting action and low kerf loss



BEST NORZON Thin Cut Right Angle Grinder Reinforced Cut-off Wheels

FEATURES	BENEFITS
• Premium abrasive and bond • R sides	• Maximum productivity



BETTER FabCut Right Angle Grinder Reinforced Cut-off Wheels

FEATURES	BENEFITS
• Quality aluminum oxide abrasive in a high performance bond system	• Over 28% better cut rate than standard aluminum oxide

BETTER Charger RightCut Right Angle Grinder Reinforced Cut-off Wheels

FEATURES	BENEFITS
• Durable zirconia alumina abrasive	• 3X the life and 2X the cut rate of standard aluminum oxide wheels • Excels on a broad range of materials, from alloys and stainless to gray iron • Maximum productivity; lowest total grinding costs



GOOD Gemini Right Angle Grinder Reinforced Cut-off Wheels

FEATURES	BENEFITS
• Quality aluminum oxide grain	• Consistent performance at a competitive price • Ideal for small jobs on a variety of metal applications from carbon to stainless steels

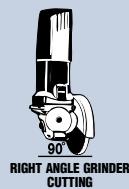


GOOD Norton Metal and Masonry Right Angle Grinder Reinforced Cut-off Wheels

FEATURES	BENEFITS
METAL	
• Versatile aluminum oxide abrasive for metalworking	• Ideal for general purpose applications and when initial price is a main consideration
MASONRY	
• Sharp silicon carbide for concrete/masonry/asphalt applications	• Engineered for various construction applications at a low initial price



CUT-OFF WHEELS



RIGHT ANGLE GRINDER REINFORCED CUT-OFF WHEELS - TYPE 41 (4" – 7") AND TYPE 42 (4-1/2" – 9") (CONTINUED)

SIZE <i>D X T X H</i>	MAX. RPM	STD. PKG.	GOOD		UPC NO.
			SPEC.		
TYPE 42 DEP. CTR - CUTTING-OFF					
4-1/2 X .045 X 7/8	13,580	20	GEMINI	66252819548	
5 X .045 X 7/8	12,225	20	GEMINI	66252819550	
6 X .045 X 7/8	10,185	20	GEMINI	66252819551	
7 X 1/16 X 7/8	8,600	20	GEMINI	66252912626	
9 X 1/16 X 5/8-11	6,600	10	GEMINI	66253019115	

Safety TIPS

- Contact your machine vendor for proper flanges and guards when using Type 41 wheels on right angle grinders.
- Use Type 41 when proper cut-off guard and equal size flanges are available.
- Use Type 27 with standard back flange and nut tool configuration.

 It is the user's responsibility to refer to and comply with ANSI B7.1

SIZE <i>D X T X H</i>	MAX. RPM	STD. PKG.	BEST		BETTER	GOOD		
			NORZON SPEC.	UPC NO.	SPEC.	UPC NO.	GEMINI UPC NO.	METAL UPC NO.
TYPE 41 FLAT CUTTING-OFF								
4 X .035 X 5/8	19,100	25		A60-OBNA2	66253529590			
4 X .040 X 5/8	15,280	25				07660701616		
4 X .045 X 5/8	15,280	25				66243527956		
4 X 1/16 X 5/8	19,100	100		FABCUT ALL PURP. FABCUT LONG LIFE	66243527827 66243527826			07660701620
4 X 3/32 X 5/8	15,280	25				66243527955		
4-1/2 X .040 X 7/8	13,580	25				07660701617		
4-1/2 X .045 X 7/8	13,580	25				66252823602		
4-1/2 X 1/16 X 7/8	13,580	25		CHARGER	66252826569			07660701621
4-1/2 X 3/32 X 7/8	13,580	25				66252823599		
5 X .040 X 7/8	12,225	25				07660701618		
5 X .045 X 7/8	12,225	25				66252823603		
5 X .050 X 7/8	12,225	25	THIN CUT	66252809829				
5 X 1/16 X 7/8	12,225	25		CHARGER	66252826570			07660701622
5 X 3/32 X 7/8	12,225	25				66252823600		
6 X .040 X 7/8	10,185	25				07660702757		
6 X .045 X 7/8	10,185	25				66252823604		
6 X 1/16 X 7/8	10,185	25		CHARGER	66252826571			
6 X 3/32 X 7/8	10,185	25				66252823601		
7 X 1/16 X 7/8	8,730	25	THIN CUT	66252900652				

CIRCULAR SAW REINFORCED CUT-OFF WHEELS (5-3/8" – 8")

BETTER	Circular Saw Reinforced Cut-off Wheels – Provide precision, thin cut
FEATURES	BENEFITS
ALUMINUM OXIDE 57A – B25N WHEELS	
• Constructed with full diameter side reinforcing; resin bond	• Versatile; durable, free cutting: offer greatest stiffness
ALUMINUM OXIDE – OBNA2 BOND WHEELS	
• Side reinforced, resin bond	• Yield maximum cut rate and minimum kerf loss; ideal when thin cut is desired
CHARGER LONG LIFE	
• Blend of premium zirconia alumina and aluminum oxide abrasives; R sides	• Outperforms standard aluminum oxide up to 3X in life





CIRCULAR SAW

CUT-OFF WHEELS

CIRCULAR SAW REINFORCED CUT-OFF WHEELS (5-3/8" – 8") (CONTINUED)

GOOD	Masonry and Metal Circular Saw Reinforced Cut-off
FEATURES	BENEFITS
• Versatile	• Ideal for slotting and cutting when initial cost is a main consideration
GEMINI ALL PURPOSE	
• Quality aluminum oxide abrasive; R sides	• Sets the A/O industry standard for cutting all material in metal fabrication applications
NORTON MASONRY	
• Sharp, silicon carbide grain	• Engineered for all masonry materials such as concrete, brick and asphalt.
NORTON METAL	
• Quality aluminum oxide abrasive	• Designed for cutting alloys, steels and ferrous metals



SIZE D X T X H	MAX. RPM	STD. PKG.	BETTER		GOOD	
			SPEC.	UPC NO.	SPEC.	UPC NO.
TYPE 41 FLAT CUTTING-OFF						
6 X .035 X 5/8	10,185	25	A60-OBNA2	66252835054	GEMINI METAL	66252809714
6 X 1/16 X 5/8	10,185	25	57A364-TB25N	66252822973	GEMINI METAL	66252809718
6 X 1/8 X 5/8	10,190	25	57A244-TB25N	66252822992		
6-1/2 X 1/8 X DM*	9,405	10			METAL MASONRY	07660789098 07660789089
7 X .035 X 5/8	8,730	25	A60-OBNA2	66252938787		
7 X .060 X 5/8	8,730	25	A60-OBNA2	66252938811		
7 X 1/16 X 5/8	8,730	25	57A364-TB25N	66252922673	GEMINI METAL	66252905957
7 X 3/32 X 5/8	8,730	25	57A244-TB25N	66252922688		
7 X 1/8 X DM*	8,730	25			METAL MASONRY	07660789097 07660789088
8 X .035 X 5/8	7,640	25	A60-OBNA2	66253042979		
8 X .060 X 5/8	7,640	25	A60-OBNA2	66253042981		
8 X 1/16 X 5/8	7,640	25	57A364-TB25N CHARGER L.L.	66253022703 66253017771	GEMINI ALL PURP GEMINI METAL	66253017795 66253007025
8 X 3/32 X 5/8	7,640	25	57A244-TB25N	66253022710		
8 X 1/8 X DM*	7,640	10			METAL MASONRY	07660789096 07660789086
8 X 1/8 X 5/8	7,640	25	37C244-TB25N 57A364-TB25N	66253043232 66253022712		

* DM DENOTES DIAMOND MOUNT; 5/8" HOLE BUSHINGS INCLUDED

CORDLESS (BATTERY-OPERATED) CIRCULAR SAW REINFORCED CUT-OFF WHEELS



CORDLESS CIRCULAR SAW

SIZE D X T X H	MAX. RPM	STD. PKG.	SPEC.	UPC NO.
TYPE 41 FOR CORDLESS				
5-3/8 X 1/8 X 10 MM	10,185	10	METAL	07660701666
6 X 1/8 X 5/8	10,185	10	METAL	07660701667
6-1/2 X 1/8 X 5/8	9,405	10	METAL	07660701668

* DM DENOTES DIAMOND MOUNT; 5/8" HOLE BUSHINGS INCLUDED

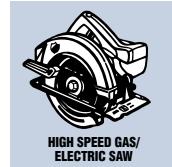
CUT-OFF WHEELS

HIGH-SPEED REINFORCED CUT-OFF WHEELS FOR GAS, ELECTRIC-POWERED AND WALK-BEHIND ROAD SAWS (12" – 18")

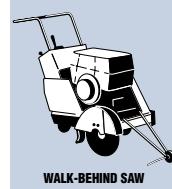
GOOD High Speed Reinforced Cut-off Wheels	
SPECIFICATION / APPLICATION	ABRASIVE TYPE
• Metalworking	• Versatile aluminum oxide
• Ductile	• Durable silicon carbide and aluminum oxide blend
• Concrete	• Sharp 24 grit silicon carbide
• Asphalt	• Coarse 16 grit silicon carbide
• Asphalt/green concrete	• Cold pressed silicon carbide blend
• For higher performance on asphalt/green concrete	• Hot pressed silicon carbide blend



GOOD						
SIZE D X T X H	MAX. RPM	STD. PKG.	METAL UPC NO.	DUCTILE UPC NO.	CONCRETE UPC NO.	ASPHALT UPC NO.
TYPE 41 CUT-OFF - FOR GAS & ELECTRIC-POWERED SAWS						
12 x 1/8 x 20 mm	6,360	10	70184680310	70184680314	70184680312	70184670243
12 x 1/8 x 1	6,360	10	70184680311	70184680315	70184680313	70184670083
14 x 1/8 x 20 mm	5,400	10	70184680317	70184680321	70184680319	
14 x 1/8 x 1	5,400	10	70184680318	70184680322	70184680320	
16 x 1/8 x 20 mm	4,700	10			70184625269	70184625283
16 x 1/8 x 1	4,700	10			70184623029	70184625276



GOOD						
SIZE D X T X H	MAX. RPM	STD. PKG.	CONCRETE UPC NO.	ASPHALT UPC NO.	ASPHALT/GREEN CONCRETE UPC NO.	
TYPE 41 CUT-OFF - FOR WALK-BEHIND SAWS						
14 x 1/8 x 20mm Pin Hole	5,400	10		70184671456		
14 x 1/8 x 1 Pin Hole	5,400	10		70184672877		
14 x 3/16 x 1 Pin Hole	4,365	10	70184680323	70184680324	70184670100*	
14 x 1/4 x 1 Pin Hole	4,365	5	70184670533	70184670535	70184670099*	
18 x 1/4 x 1 Pin Hole	4,250	5	70184670098	70184670095	70184670103*	
18 x 3/8 x 1	4,250	5			70184648998*	



* THESE ASPHALT/GREEN CONCRETE WHEELS ARE HOT-PRESSED FOR ADDED STRENGTH

CUT-OFF WHEEL STARTING RECOMMENDATIONS BY MATERIAL

MATERIAL	SMALL ANGLE GRINDERS	RIGHT ANGLE GRINDERS	CIRCULAR SAWS	PORTABLE GAS / ELECTRIC SAWS	WALK BEHIND SAWS	STATIONARY SAWS	CHOP SAWS
Angle / Channel Iron Bar / Sheet Stock	NORZON TAF Gemini Long Life	Charger Rightcut Norton Metal Gemini Rightcut	Norton Metal	Norton Metal	-	Charger Long Life Gemini Long Life	Charger Long Life Gemini Long Life
Metal Studs / Tubing	-	Gemini Rightcut	Norton Metal	Norton Metal	-	Gemini Long Life	Norton Steel Stud
Cast Iron / Pipe	Gemini Free Cut	Gemini Rightcut	Norton Metal	Norton Metal	-	Gemini Free Cut	Gemini Free Cut
Stainless / Alloys	NORZON TAF	Charger Rightcut	Norton Metal	Norton Metal	-	Charger Free Cut	Charger Free Cut
Aluminum / Brass / Bronze	Gemini Free Cut	Gemini Rightcut	Norton Metal	Norton Metal	-	Gemini Free Cut	Gemini Aluminum
Concrete / Brick / Block Asphalt / Green Concrete	-	-	Norton Masonry	Norton Concrete Norton Asphalt / Green Concrete	Norton Concrete Norton Asphalt / Green Concrete	Norton Masonry	Norton Masonry
Ductile				Norton Ductile	-		
Fiberglass / Plastic Paint / Rust	Gemini Free Cut	Gemini Rightcut	Norton Metal	-	-	Gemini Free Cut	Gemini Free Cut

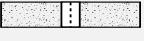
CUT-OFF WHEELS



REINFORCED RAIL CUT-OFF WHEELS (14", 16" SIDE REINFORCED, R SIDES)

BETTER NorZon III RailCut and NorZon III Rail FastCut		
FEATURES	BENEFITS	
• NorZon III RailCut and NorZon III Rail FastCut	<ul style="list-style-type: none"> Ideal for high powered, well-maintained machines Maximum number of cuts per wheel Fastest cutting times Highest value on the cost per cut basis 	

GOOD A24 RailCut and Rail FastCut		
FEATURES	BENEFITS	
• A24-RailCut and Rail FastCut	<ul style="list-style-type: none"> The choice for light-duty applications and older machines with less horsepower Work under a wide range of operating conditions Maintain cutting through out the life of the wheel Smooth, easy cutting action 	

TYPE 41 CUT-OFF			BETTER	GOOD		
SIZE D X T X H	MAX. RPM	STD. PKG.	SPEC	UPC NO.	SPEC	UPC NO.
14 X 1/8 X 1	5,400	10	NORZON III RAILCUT NORZON III RAIL FASTCUT	66253360493 66253363694	A24-RAILCUT	66253363693
16 X 1/8 X 1	4,800	10	NORZON III RAILCUT NORZON III RAIL FASTCUT	66253464607 66253464415	A24-RAIL FASTCUT	66253411892

CUT-OFF WHEEL COMPETITIVE CROSS REFERENCE

NORTON	FLEXOVIT	METABO	SAIT	3M	WALTER
FOR SMALL ANGLE OR IN-LINE PORTABLE GRINDERS (2"- 4")					
NORZON TAF				Green Corps	-
Charger	FLEXON	-	SAITECH	-	-
Gemini Free Cut	A36R	Slicer	A24R	-	A60-ZIP
Gemini Long Life	A46T	A 60 TZ	A36T	-	A24-ZIP
FOR ANGLE GRINDERS (4" - 9")					
Charger Rightcut	-	-	-	-	-
Gemini Rightcut	-	-	SAITECH .045	-	A30-ZIP
Norton Metal	Razorblade	Slicer	0.045	-	-
FOR CIRCULAR SAWS (6" - 8")					
Norton Metal	A36TB38	A 30 S	-	-	A30-ZIP
Norton Masonry	C30UB64	C 30 S	-	-	C-30
FOR PORTABLE GAS OR ELECTRIC SAWS (12" - 16")					
Norton Metal	A24TB	A 24 N	Brute	-	A24 Portacut
Norton Concrete	AC24SB	C 24 N	C24R	-	C24 Portacut
Norton Ductile	AC24SB	AC 24 R	Ductile	-	-
Norton Asphalt	C16UB	C 16 N	Big M.A.C.	-	-
FOR WALK-BEHIND CONSTRUCTION SAWS (14", 18")					
Norton Asphalt / Green Concrete	C16UB	C 16 N	C16	-	-
Norton Hot Press	HPC16AG	-	Street Walker	-	-
Asphalt / Green Concrete					
FOR STATIONARY SAWS (10" - 20")					
Charger Free Cut	-	-	-	-	-
Charger Long Life	-	-	-	-	-
Gemini Free Cut	A30RB	A 30 R	A24N	-	A24-FC RIPCUT
Gemini Long Life	A30SB	A 30 N	A24R	-	A24-RIP
Norton Masonry	C24SB	C 30 S	C24R	-	-
FOR CHOP SAWS (10" - 16")					
Charger Free Cut	-	-	SAITECH Steel Worker	-	-
Charger Long Life	-	-	-	-	-
Gemini Free Cut	A30RB	A 30 R	EZ-CHOP	-	A30 Chopcut II
Gemini Long Life	A30SB	A 30 S	Iron Worker	-	A30-HC Chopcut
Gemini Aluminum	-	-	Aluminum	-	A30-ALU Chopcut
Norton Masonry	C30UB	-	-	-	-
Norton Steel Stud	A30TB	-	Stud King	-	-

CUT-OFF WHEELS

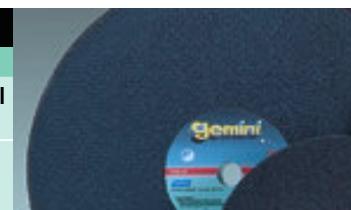


LARGE DIAMETER REINFORCED CUT-OFF WHEELS FOR STATIONARY SAWS (10" – 24")

BETTER Large Diameter Stationary Reinforced Cut-off Wheels	
FEATURES	BENEFITS
23A	<ul style="list-style-type: none"> Aluminum oxide abrasive; D sides Engineered for fast cut and long life on a variety of applications
U57A	<ul style="list-style-type: none"> Aluminum oxide abrasive; R sides Engineered for fast cut and long life on a variety of applications
57A – B25N BOND WHEELS	<ul style="list-style-type: none"> Constructed with full diameter side reinforcing; resin bond Versatile; durable, free cutting; offer greatest stiffness
CHARGER	<ul style="list-style-type: none"> A blend of premium zirconia alumina and aluminum oxide Outperforms standard aluminum oxide up to 3X in life High performance bond system Over 25% better cut rate than standard aluminum oxide



GOOD Large Diameter Stationary Reinforced Cut-off Wheels	
FEATURES	BENEFITS
<ul style="list-style-type: none"> Quality aluminum oxide abrasive Available in either aluminum oxide or silicon carbide abrasives 	<ul style="list-style-type: none"> Sets the aluminum oxide industry standard for cutting all material in metal fabrication applications Choose aluminum oxide for metal cutting applications and silicon carbide for masonry



SIZE D X T X H	MAX. RPM	STD. PKG.	BETTER		GOOD	
			SPEC.	UPC NO.	SPEC.	UPC NO.
TYPE 41 CUT-OFF						
10 X 1/16 X 5/8	6,110	25	57A364-TB25N 57A461-TB25N	66253122814 66253122817		
10 X 3/32 X 5/8	6,110	10	57A364-TB25N CHARGER FREE CUT CHARGER LONG LIFE	66253122823 66253106107 66253106108	GEMINI FREE CUT GEMINI LONG LIFE MASONRY	66253106101 66253106102 07660789391
10 X 1/8 X 5/8	6,110	25	57A244-TB25N	66253122826		
12 X 3/32 X 1	5,095	10	23A364-RB25B	66253261999		
12 X 1/8 X 1	5,095	10	CHARGER FREE CUT CHARGER LONG LIFE	66253207550 66253207551	GEMINI FREE CUT GEMINI LONG LIFE MASONRY	66253207547 66253207548 07660789393
14 X 1/8 X 1	4,365	10	CHARGER FREE CUT CHARGER LONG LIFE	66253306622 66253306623	GEMINI FREE CUT GEMINI LONG LIFE MASONRY	66253306609 66253306611 07660789396
16 X 1/8 X 1	3,820	10	U57A304-TB25B	66253464694		
16 X 5/32 X 1	3,820	10	U57A304-TB65B CHARGER FREE CUT CHARGER LONG LIFE	66253464576 66253410194 66253410195	GEMINI FREE CUT GEMINI LONG LIFE	66253410183 66253410184
18 X 5/32 X 1	3,015	10			GEMINI FREE CUT	66253410185
20 X 5/32 X 1	2,710	5	U57A244-TB25B CHARGER FREE CUT CHARGER LONG LIFE	69078666948 69078609045 69078609046	GEMINI FREE CUT GEMINI LONG LIFE	69078609031 69078609032
20 X 3/16 X 1	2,710	5			GEMINI FREE CUT GEMINI LONG LIFE	69078609033 69078609034
24 X 3/16 X 1-3/4	2,260	10	U57244-RB25B	69080166319		

NOTE: 3/32", 1/8" AND 5/32" THICK WHEELS ARE SIDE REINFORCED. 3/16" THICK WHEELS ARE CENTRALLY REINFORCED.

TechTips

Run the cut-off machine at the highest possible speed marked on the wheel.

Long Life wheels should be used on a cut-off machine with 1 horsepower for every inch of wheel diameter.

With a less powerful machine, we recommend starting with a Free Cut specification.

! It is the user's responsibility to refer to and comply with ANSI B7.1

CUT-OFF WHEELS



CHOP SAW REINFORCED WHEELS (10" – 16")

BETTER Charger Chop Saw Reinforced Wheels

FEATURES	BENEFITS
• Zirconia alumina/aluminum oxide abrasive blend	• 2X the life and cut rate of aluminum oxide
• High performance resin bond	• Free-cutting; burn-free cut
• Free Cut - side reinforced	• Engineered for larger cross-sections and/or hard-to-cut materials • Resist breakage and provide straight cuts
• Long Life - side reinforced	• Ideal for small cross-section workpieces • Resist breakage and provide straight cuts
• Rapid Cut - centrally reinforced, rough sides	• Free cutting, non-binding; burr- and burn-free cuts



GOOD Gemini Chop Saw Reinforced Wheels

FEATURES	BENEFITS
• Free Cut - side reinforced	• Engineered for larger cross-sections and/or hard-to-cut materials • Resist breakage and provide straight cuts
• Long Life - side reinforced	• Ideal for small cross-section workpieces • Resist breakage and provide straight cuts
• Rapid Cut - centrally reinforced, rough sides	• Free cutting, non-binding; burr- and burn-free cuts
• Aluminum - specially formulated bond for aluminum and other soft, non-ferrous metals; no wax or rubber fillers	• Free cutting; resists loading • No surface contamination



GOOD Steel Stud Cutter Chop Saw Reinforced Wheels

FEATURES	BENEFITS
• Thin, side-reinforced; aluminum oxide abrasive	• Designed specifically for cutting steel studs

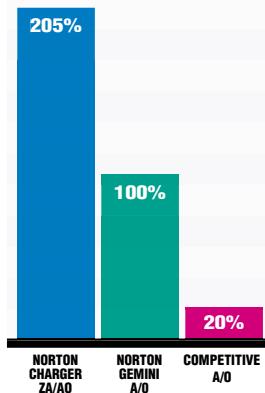


BETTER TYPE 41 FLAT CUTTING-OFF

SIZE <i>D X T X H</i>	MAX. RPM	STD. PKG.	BETTER		GOOD	
			SPEC.	CHARGER UPC NO.	SPEC.	UPC NO.
10 X 7/64 X 1	6,110	10			GEMINI LONG LIFE	66253106109
12 X 7/64 X 1	5,095	10	FREE CUT LONG LIFE	66253207552 66253207553	GEMINI LONG LIFE METAL	66253207554 07660789400
14 X 7/64 X 1	4,365	10	FREE CUT LONG LIFE RAPID CUT	66253306624 66253306625 66253309614	GEMINI ALUMINUM GEMINI FREE CUT GEMINI LONG LIFE GEMINI RAPID CUT STUD CUTTER METAL MASONRY	66253314816 66253306627 66253306626 66253313588 07660789405 07660789399 07660789402
16 X 7/64 X 1	3,820	10	FREE CUT LONG LIFE RAPID CUT	66253410196 66253410197 66253424386	GEMINI LONG LIFE	66253410198

RELATIVE WHEEL LIFE

TEST DONE WITH
14 X 7/64 X 1 CHOP SAW



Tech Tips

Use Long Life chop saw wheels on small cross section workpieces.

It is the user's responsibility to refer to and comply with ANSI B7.1

Use Free Cut chop saw wheels on larger cross-sections and/or hard-to-cut materials

CUT-OFF WHEELS



FOUNDRY REINFORCED CUT-OFF WHEELS (R SIDES)

BEST B65B and B97B Bond Cut-off Wheels	
FEATURES	BENEFITS
• Rough (R) sides	• Free cutting
• Premium 90A abrasive and B97 bond system	• Lowest cost per cut; improved life over B65 bond wheels
• 4NZ - zirconia alumina abrasive and proprietary B65B bond system	• Engineered specifically for foundry applications • Offer improved life over B25 bond wheels especially on stainless steels



BETTER NorZon Foundry Cut-off Wheels	
FEATURES	BENEFITS
• NorZon Foundry Cut-off	• For premium performance on stainless steel, aerospace alloys, cast irons and steel



GOOD Foundry Cut-off Wheels	
FEATURES	BENEFITS
• Foundry Cut-off – U57A aluminum oxide abrasive	• Consistent performance • Tough and versatile abrasive, low cost

SIZE <i>D X T X H</i>	MAX. RPM	STD. PKG.	BEST		BETTER		GOOD	
			SPEC	UPC NO.	SPEC	UPC NO.	SPEC	UPC NO.
TYPE 41 FLAT CUTTING-OFF								
12 X 1/8 X 1	5,095	10			NZ FDRY ALL PURPOSE NZ FDRY FREE CUT NZ FDRY LONG LIFE	66253249600 66253220549 66253220550	FOUNDRY ALL PURP. FOUNDRY FREE CUT FOUNDRY LONG LIFE	66253220551 66253220552 66253220553
14 X 1/8 X 1	4,365	10			NZ FDRY ALL PURPOSE NZ FDRY FREE CUT NZ FDRY LONG LIFE	66253319576 66253319577 66253319578	FOUNDRY ALL PURP. FOUNDRY FREE CUT FOUNDRY LONG LIFE	66253319579 66253319580 66253319581
16 X 5/32 X 1	3,820	10	90A244-TB97N	66253422205	NZ FDRY ALL PURPOSE NZ FDRY FREE CUT NZ FDRY LONG LIFE	66253466437 66253431487 66253431488	FOUNDRY ALL PURP. FOUNDRY FREE CUT FOUNDRY LONG LIFE	66253431489 66253431490 66253431491
20 X 5/32 X 1	2,710	10	4NZ24-TB65B 90A244-TB97B 90A244-TB97N 90A244-YB97B 90A244-YB97N	69078666985 69078622208 69078622209 69078650375 69078650377	NZ FDRY ALL PURPOSE NZ FDRY FREE CUT NZ FDRY LONG LIFE NZ FDRY INT. REINFRCD	69078627986 69078627987 69078627988 69078608926	FOUNDRY ALL PURP. FOUNDRY FREE CUT FOUNDRY LONG LIFE	69078627989 69078627990 69078627991
20 X 3/16 X 1	2,710	10	90A204-YB97B 90A244-TB97B	69078650380 69078622210	NZ FDRY ALL PURPOSE NZ FDRY FREE CUT NZ FDRY LONG LIFE	69078649613 69078627992 69078627993	FOUNDRY ALL PURP. FOUNDRY FREE CUT FOUNDRY LONG LIFE	69078649612 69078627994 69078627995
24 X 7/32 X 1-3/4	2,260	10	4NZ24-TB65B 90A204-VB97B 90A204-YB97B	69083166297 69083108034 69083150382	NZ FDRY ALL PURPOSE NZ FDRY FREE CUT NZ FDRY LONG LIFE	69083149615 69083125991 69083125992	FOUNDRY ALL PURP. FOUNDRY FREE CUT FOUNDRY LONG LIFE	69083125993 69083125994 69083125995
26 X 7/32 X 1-3/4 R SIDES	2,090	10			U57A244-YB65B	69083166431		
30 X 1/4 X 1-3/4 R SIDES	1,810	10	4NZ24-TB65B 4NZ24-YB65B 90A204-YB97B 90A204-ZB97B 90A244-TB97B	69210466453 69210466464 69210450386 69210450387 69210422211				

CUT-OFF WHEELS

REINFORCED CUT-OFF WHEELS (CONTINUED)

SpecCheck

Reinforced cut-off wheels contain strengthening fabric or filaments, which make them resistant to cross bending breakage. All portable cut-off, swingframe, locked-head push-through and foundry chop stroke operations require reinforced cut-off wheels.

REINFORCEMENTS

B – filaments inside cut-off wheel. Used for fixed work operations with low probability of side pressure

N – reinforced on the side of the wheel: offer greatest stiffness

SIDE PATTERNS

Smooth sides – used for wet grinding.

R sides – abrasive particles protrude from sides of wheel. Used wet or dry on most metals.

D sides – cross-hatch pattern. Preferred for dry cutting on non-metallics.

FOUNDRY NON-REINFORCED CUT-OFF WHEELS (12" – 20")

24

BETTER	Non-reinforced Cut-off Wheels
FEATURES	BENEFITS
• Aluminum oxide abrasive	• Cool cutting on heat sensitive materials
• R55 rubber bond	• Soft acting for hardest metals; primarily for wet cutting; can be used dry
• B25 (W) resin bond	• Durable, freeness of cut; zone reinforced



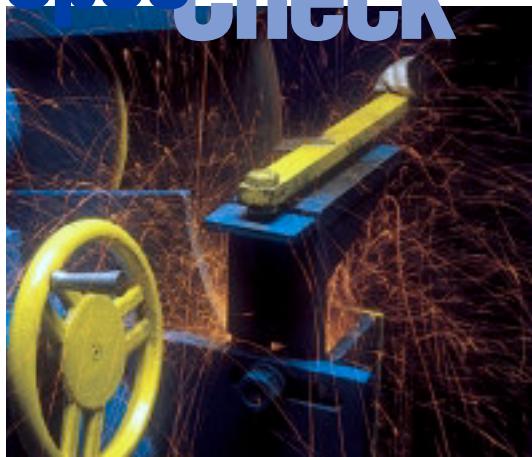
SIZE D X T X H	MAX. RPM	STD. PKG.	BETTER		GOOD	
			SPEC	UPC NO.	SPEC	UPC NO.
TYPE 41 FLAT CUTTING-OFF						
12 X 3/32 X 1	5,095	10	57A46-P4R55 U57A461-PB25	66253222837 66253261887		
14 X 3/32 X 1	4,365	10	57A46-P4R55	66253322853		
16 X 1/8 X 1	3,820	10			GEMINI ALL PURPOSE	66253422942
20 X 1/8 X 1	2,710	10	57A46-P4R55 U57A304-VB25W	69078622951 69078665497		

TechTips

■ Non-Reinforced cut-off wheels are designed for use on "fixed base" types of machines where the work is securely clamped, guarded, and where the wheel operates on a controlled cutting plane.

■ Wheels with a "W" reinforcement (reinforcement around the hole) are not considered to be truly reinforced.

SpecCheck



SPECIFICATION SELECTION GUIDE

NON-REINFORCED

APPLICATION

Soft metals (wet or dry)

Hard metals (wet or dry)

WHEEL SPECIFICATION

B25 bond

R55

REINFORCED

APPLICATION

Stainless steel and super alloys (dry)

Carbon and mild steels (dry)

WHEEL SPECIFICATION

90A204-YB97B
NorZon Foundry Cut-off

4NZ24-TB65B
NorZon Foundry Cut-off

CUT-OFF WHEELS

TOOLROOM REINFORCED CUT-OFF WHEELS (6" – 12")

BETTER Engineered Reinforced Cut-off Wheels – Provide precision, thin cut

FEATURES **BENEFITS**

ALUMINUM OXIDE – OBNA2 BOND WHEELS

- Side reinforced, resin bond
- Yields maximum cut rate and minimum kerf loss; ideal when thin cut is desired

ALUMINUM OXIDE – B25N BOND WHEELS

- Constructed with full diameter side reinforcing; resin bond
- Versatile; durable, free cutting; offer greatest stiffness



BETTER

SIZE D X T X H	MAX. RPM	STD. PKG.	SPEC	UPC NO.
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TYPE 41 FLAT CUTTING-OFF

6 X .035 X 1/2	10,190	25	A60-OBNA2	66252835053
6 X .035 X 1-1/4	10,190	25	A60-OBNA2	66252835055
6 X .060 X 1/2	10,190	25	A60-OBNA2	66252835164
6 X .060 X 1-1/4	10,190	25	A60-OBNA2	66252835165
6 X 1/16 X 1/2	10,190	25	57A364-TB25N	66252822969
7 X .035 X 1/2	8,730	25	A60-OBNA2	66252938786
7 X .035 X 1-1/4	8,730	25	A60-OBNA2	66252938788
7 X .060 X 1/2	8,730	25	A60-OBNA2	66252938816
7 X .060 X 1-1/4	8,730	25	A60-OBNA2	66252938796
7 X 1/16 X 1-1/4	8,730	25	57A364-TB25N	66252922676
8 X .035 X 1/2	7,640	25	A60-OBNA2	66253043014
8 X .035 X 1-1/4	7,640	25	A60-OBNA2	66253042980
8 X .060 X 1/2	7,640	25	A60-OBNA2	66253043009
8 X .060 X 1-1/4	7,640	25	A60-OBNA2	66253042983
8 X 1/16 X 1-1/4	7,640	25	57A364-TB25N	66253022705
10 X .035 X 5/8	6,110	25	A60-OBNA2	66253149129

CONTINUED

BETTER

SIZE D X T X H	MAX. RPM	STD. PKG.	SPEC	UPC NO.
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TYPE 41 FLAT CUTTING-OFF

10 X .060 X 5/8	6,110	25	A60-OBNA2	66253149317
10 X .060 X 3/4	6,110	25	A60-OBNA2	66253149183
10 X .060 X 1-1/4	6,110	25	A60-OBNA2	66253149186
12 X .060 X 1	5,095	10	A60-OBNA2	66253261811
12 X .075 X 1	5,095	10	A60-OBNA2	66253261910
12 X .075 X 1-1/4	5,095	10	A60-OBNA2	66253261858

Tech Tips

Reinforced cut-off wheels are designed to resist breakage caused by severe cross-bending and are required on any operation where the work is not securely clamped.

! It is the user's responsibility to refer to and comply with ANSI B7.1

SpecCheck

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSES	SUGGESTED CORRECTION
Poor cutting rate	Insufficient power used Wheel too hard Contact area too large Wheel too coarse Wheel side out of truth	Increase feed or pressure to full power Use softer grade, Free Cut or thinner wheel Reduce contact area Use finer grit or Free Cut wheel Check spindle runout
Non-square cuts	Work not clamped properly Misaligned spindle bearings Poor coolant distribution Wheel is too hard	Check clamp and clean to remove swarf Check for bearing truth and alignment Ensure equal volume of coolant to each wheel side Use softer acting wheel - softer grade or finer grit or Free Cut
Workpiece burn	Insufficient feed rate Poor coolant flow Wheel is too coarse Wheel is too hard Wheel is running out Wheel speed is too slow	Work machine to maximum power available Increase volume and direct at cutting point Use finer grit or Free Cut wheel or more machine power Use softer grade, thinner or Free Cut wheel Check spindle and flanges Ensure tight flanges and maximum speed being used
Poor finish	Too much burr Wheel too coarse	Use finer grit or softer grade or Free Cut wheel Use finer grit or Free Cut wheel

CUT-OFF WHEELS

TOOLROOM NON-REINFORCED CUT-OFF WHEELS (6" – 12")

BETTER	Non-reinforced Cut-off Wheels	
FEATURES	BENEFITS	
• B Bond	• A mild acting resin bond for light cut-off applications. BW is zone reinforced	
• B25 Bond	• A versatile, free-cutting, durable resin bond	
• E7 Bond	• A shellac bond recommended for highly critical applications where no burr, heat checks, or discoloration is permitted	
• R30 Bond	• Rubber bond primarily for wet, ultra-thin cutting	
• RR55 Bond	• Versatile, free cutting, rubber bond used primarily for wet cut-off	
• Metlab – engineered for sectioning samples during metallurgical evaluations	• Produce minimal burr and burn	
• Metlab 57A90-K4R30	• Ideal for use on hard metals	
• Metlab 88A801-HB82	• Designed for longer life and use on softer materials	



SIZE D X T X H	MAX. RPM	STD. PKG.	BETTER	
TYPE 41 FLAT CUTTING-OFF				
6 X .015 X 1-1/4	6,370	25	57A90-R0R30	66252822953
6 X .020 X 1-1/4	6,370	25	57A90-R0R30	66252822954
6 X 1/32 X 1-1/4	6,370	25	57A60-M8B	66252822958
6 X 1/16 X 1/2	7,640	25	57A541-RB25	66252822970
6 X 1/16 X 1-1/4	7,640	25	57A60-M8B	66252822975
7 X 1/32 X 1-1/4	5,460	25	57A60-M8B 57A60-08B 57A60-Q8B	66252922983 66252922986 66252922987
7 X 1/32 X 1-1/4	5,460	25	57A601-PB25 57A601-RB25	66252922988 66252922989
7 X 1/32 X 1-1/4	5,185	25	57A60-0E7	66252922985
7 X 1/32 X 1-1/4	5,460	25	23A601-PB25	66252938701
7 X .050 X 1-1/4	5,460	25	23A601-PB25	66252938724
7 X 1/16 X 1/2	6,550	25	57A60-08B	66252922672
7 X 1/16 X 1-1/4	6,550	25	57A46-M8B 57A60-M8B 57A60-08B	66252922677 66252922681 66252922684
7 X 1/16 X 1-1/4	5,185	25	57A60-0E7	66252922683
7 X 3/32 X 1-1/4	6,550	25	57A60-M8B	66252922690
7 X 1/8 X 1-1/4	6,550	25	57A60-M8B	66252922692
8 X 1/32 X 1-1/4	4,775	25	57A60-N8B	66253022694
8 X 1/16 X 1/2	5,730	25	57A60-M8B	66253022702
8 X 1/16 X 1-1/4	5,730	25	57A60-M8B	66253022708
8 X 1/16 X 1-1/4	4,540	25	57A60-0E7	66253022709
8 X 1/8 X 1-1/4	5,730	25	57A46-M8B	66253022713
10 X 1/16 X 5/8	4,585	25	57A46-Q8BW 57A60-M8BW	66253122816 66253122818
10 X 1/16 X 5/8	4,585	25	57A46-P4R55 57A80-P6R55	66253122815 66253122819
10 X 1/16 X 1-1/4	3,820 4,585	5	57A90-K4R30 METLAB 88A901-HB82 METLAB	66253122821 66253149449
10 X 3/32 X 5/8	4,585	25	57A60-M8BW	66253122824
12 X 1/16 X 1-1/4	3,185 3,820	5	57A90-K4R30 METLAB 88A901-HB82 METLAB	66253222833 66253262172
12 X 1/16 X 3	4,585	10	57A60-M8B	66253222834

TechTips

- Non-Reinforced cut-off wheels are designed for use on "fixed base" types of machines where the work is securely clamped, guarded, and where the wheel operates on a controlled cutting plane.
- Wheels with a "W" reinforcement (reinforcement around the hole) are not considered to be truly reinforced.
- Clamp or fixture the workpiece for straightest cuts
- Run wheels at the highest possible speed marked on the wheel and make cuts as quickly as possible.
- It is recommended that a cut-off machine should have 1 horsepower for every inch of wheel diameter. For less than this, we recommend using a softer specification.
- Using a harder grade wheel increases wheel life, but it also increases burn, power required and decreases cut rate.
- Using a coarser grit wheel increases wheel life and cut rate, but it also increases burr and power required.



It is the user's responsibility to refer to and comply with ANSI B7.1

DIAMOND AND CBN PRODUCTS

BETTER		
SIZE D X T	SPEC	UPC NO.
TYPE DW MOUNTED POINTS - DIAMOND		
1/8 X 1/4 STEEL SPINDLE 1/8 X 1-1/2	SD150-R100B99-SOLID	69014192235
3/16 X 1/4 STEEL SPINDLE 1/8 X 1-1/2	SD100-R100B99-SOLID	69014192238
1/4 X 1/4 STEEL SPINDLE 1/8 X 1-1/2	SD100-R100B99-SOLID	69014192240
	SD150-R100B99-SOLID	69014192241
	SD220-R100B99-SOLID	69014192242
3/8 X 1/4 STEEL SPINDLE 1/8 X 1-1/2	SD100S-R100B99-SOLID	69014192243
3/8 X 3/8 STEEL SPINDLE 1/8 X 1-1/2	SD120-R100B99-SOLID	69014191668
3/8 X 3/8 CARBIDE SPINDLE 1/8 X 1-1/2	SD220-R100B99-SOLID	69014192247
1/2 X 1/2 STEEL SPINDLE 1/4 X 1-1/2	SD100S-R100B99-SOLID	69014192248
	SD220-R100B99-SOLID	69014192249
3/4 X 3/8 STEEL SPINDLE 1/4 X 1-1/2	SD150-R100B99-SOLID	69014192251
1 X 1/2 STEEL SPINDLE 1/4 X 1-1/2	SD100-R100B99-SOLID	69014192428

TYPE DW MOUNTED POINTS - CBN		
SIZE	SPEC	UPC NO.
3/16 X 1/4 CARBIDE SPINDLE .125 X 1-3/4	CB150-WB99-SOLID	69014192258
1/4 X 1/4 CARBIDE SPINDLE .125 X 1-3/4	CB120-WB99-SOLID	69014192260
3/8 X 3/8 STEEL SPINDLE .250 X 2-1/4	CB100-WB99-SOLID	69014192266
1/2 X 1/4 CARBIDE SPINDLE .250 X 2-1/4	CB120-TB99-SOLID	69014192270
1/2 X 3/8 CARBIDE SPINDLE .250 X 2-1/4	CB100-WB99-SOLID	69014192271
1/2 X 1/2 CARBIDE SPINDLE .250 X 2-1/4	CB100-WB99-SOLID	69014192272
3/4 X 1/4 CARBIDE SPINDLE .250 X 2-1/4	CB100-WB99-SOLID	69014192276
1 X 1/4 CARBIDE SPINDLE .250 X 1-3/4	CB100-WB99-SOLID	69014192277

STANDARD PACKAGE = 1

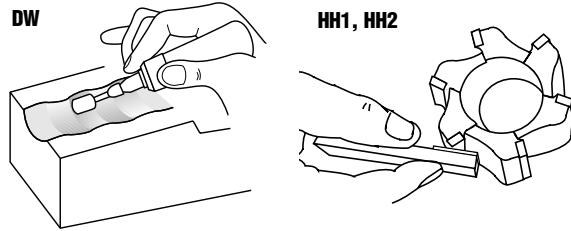
BETTER		
SIZE T X W X L	SPEC	UPC NO.
TYPE HH1 HAND HONES - DIAMOND		
1/4 X 1/4 X 6 ONE INSERT 1/16 DEEP 1" LONG IN ONE 1/4 SURFACE	ASD220-R100B99-1/16	69014192139
1/4 X 3/8 X 4 ONE INSERT 1/16 DEEP 1" LONG IN ONE 3/8 SURFACE	ASD100-R100B99-1/16 ASD180-R100B99-1/16 ASD220-R100B99-1/16 ASD320-R100B99-1/16 ASD400-R100B99-1/16 D10/20MIC-R100B99-1/16	69014192141 69014192142 69014191670 69014191672 69014192143 69014192144
1/4 X 3/8 X 4 ONE INSERT 1/16 DEEP 1" LONG IN ONE 3/8 SURFACE	SD220-100V99-1/16 SD320-100V99-1/16	69014191671 69014192140

STANDARD PACKAGE = 1

Refer to "Brake Controlled Truing Devices" and "Dressing Sticks" sections for truing and dressing products.

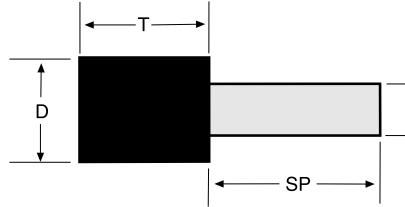
SIZE T X W X L	SPEC	UPC NO.
TYPE HH2 HAND HONES - DIAMOND		
1/4 X 3/8 X 4 TWO INSERTS 1/16 DEEP 1" LONG IN ONE 3/8 SURFACE	ASD120/220-R100B99-1/16 ASD150/320-R100B99-1/16 ASD220/320-R100B99-1/16 ASD220/400-R100B99-1/16 ASD320/400-R100B99-1/16	69014192150 69014192177 69014192178 69014192179 69014192180
1/4 X 3/8 X 4 TWO INSERTS 1/16 DEEP 1" LONG IN ONE 3/8 SURFACE	SD220/320-100V99-1/16	69014192149
1/4 X 7/16 X 4 TWO INSERTS 1/16 DEEP 1" LONG IN ONE 7/16 SURFACE	ASD180/220-R100B99-1/16	69014192183
1/4 X 7/16 X 4 TWO INSERTS 1/16 DEEP 1" LONG IN ONE 7/16 SURFACE	SD320/400-100V99-1/16	69014192182

STANDARD PACKAGE = 1



TYPE DW

D - DIAMETER

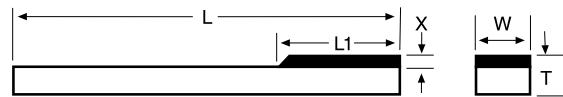


T - THICKNESS
Y - SPINDLE DIAMETER
SP - SPINDLE LENGTH

TYPE HH1

L - LENGTH
L1 - LENGTH OF ABRASIVE
X - ABRASIVE DEPTH

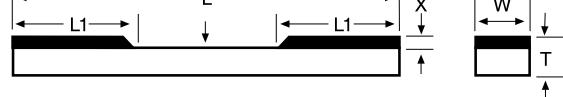
W - WIDTH
T - THICKNESS (BACK)



TYPE HH2

L - LENGTH
L1 - LENGTH OF ABRASIVE

X - ABRASIVE DEPTH
W - WIDTH
T - THICKNESS (BACK)



DIAMOND AND CBN PRODUCTS

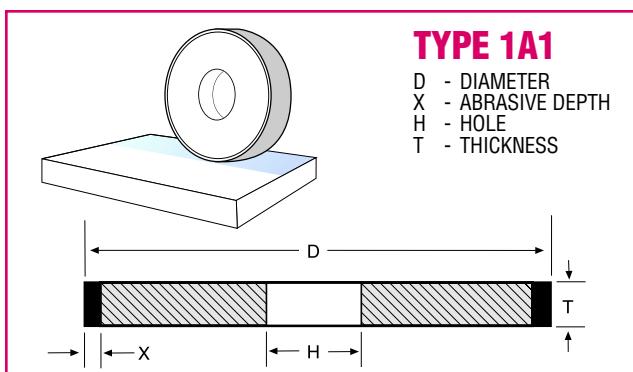
BETTER		
SIZE D X T X H	SPEC	UPC NO.
TYPE 1A1 STRAIGHT WHEELS - DIAMOND		
3/4 X 1/4 X 1/4	ASD150-R100B99-1/8	69014192174
1 X 1/4 X 1/4	ASD220-R75B99-1/8 SD100-R100B99-1/8	66260273568 69014192175
1 X 1/2 X 1/2	SD120-R100B99-1/8	66260273570
1-1/2 X 1/2 X 1/2	ASD180-R75B99-1/8 D6/12MIC-N100B99-1/8	66260273573 69014192176
2 X 1/8 X 1/4	SD100-R100B99-1/8	69014192184
2 X 1/2 X 1/2	ASD180-R75B99-1/4	66260273576
3 X .006 X 1/2 (ME12098)	M3D220-N75M99-1/8	69014192342
3 X .010 X 1/2 (ME12098)	M4D220-L100M99-1/8	69014192345
3 X 1/8 X 3/4	ASD150-R75B99-1/8	69014192186
3 X 1/4 X 3/4	SD100S-R100B99-1/4 SD180-N100B99-1/8	66260273582 69014192187
4 X .020 X 1-1/4	SD320-R100B99-1/8	69014192188
4 X 1/32 X 1-1/4	SD100S-R100B99-1/4	69014192192
4 X 1/16 X 1-1/4	SD100S-R100B99-1/4 SD150-R100B99-1/4 SD180-R100B99-1/4 SD220-R100B99-1/4	66260273583 66260273584 66260273585 66260273586
4 X 1/8 X 3/4	SD150-R100B99-1/8	69014192024
4 X 1/8 X 1-1/4	SD150-R100B99-1/8	69014191677
4 X 1/8 X 1-1/4	SD220-R100B99-1/4	66260273580
4 X 1/4 X 1/2	SD150-R100B99-1/4	66260273590
4 X 1/4 X 3/4	SD150-R100B99-1/4	66260273592
4 X 1/4 X 1-1/4	SD100S-R100B99-1/4 SD120-R100B99-1/4 SD150-R100B99-1/4	66260273587 66260273588 66260273589
4 X 1/2 X 1-1/4	SD150-R100B99-1/4	66260273594
6 X 1/32 X 1-1/4	SD220-R100B99-1/8	69014192197
6 X 1/32 X 1-1/4	ASD150-R100B99-1/4	66260273595
6 X 1/16 X 1-1/4	SD100-R100B99-1/4 SD150-R100B99-1/4 SD180-R100B99-1/4 SD220-R100B99-1/4 SD320-R100B99-1/4	66260273596 66260273597 66260273598 66260273599 66260273600
6 X 1/8 X 1-1/4	ASD150-R50B99-1/4	66260273616
6 X 1/8 X 1-1/4	ASD150-R75B99-1/4 ASD180-R75B99-1/4	66260273617 69014192809
6 X 1/8 X 1-1/4	SD100-R100B99-1/4 SD120-R100B99-1/4 SD150-R100B99-1/4 SD180-R100B99-1/4 SD220-R100B99-1/4	66260273611 66260273612 66260273613 66260273614 66260273615
6 X 1/4 X 1-1/4	ASD150-R50B99-1/8	66260299214
6 X 1/4 X 1-1/4	ASD100S-R75B99-1/8 ASD120-R75B99-1/8 ASD150-R75B99-1/8	69014192205 69014191689 69014191690
6 X 1/4 X 1-1/4	ASD120-R75B99-1/4 ASD150-R75B99-1/4 ASD180-R75B99-1/4 ASD220-R75B99-1/4 ASD320-R75B99-1/4	69014192769 66260273609 69014192770 69014192771 69014192772
6 X 1/4 X 1-1/4	RMD180-P100V99-1/8	69014192203
6 X 1/4 X 1-1/4	SD120-R100B99-1/8 SD150-R100B99-1/8 SD180-R100B99-1/8 SD220-R100B99-1/8	69014191691 69014191692 69014191693 69014191694
6 X 1/4 X 1-1/4	SD220-R100B99-1/4	69014192764
6 X 3/8 X 1-1/4	ASD150-R75B99-1/8	69014191695
6 X 3/8 X 1-1/4	SD150-R100B99-1/8	69014191696

CONTINUED

BETTER		
SIZE D X T X H	SPEC	UPC NO.

 TYPE 1A1 STRAIGHT WHEELS - DIAMOND | | | 6 X 3/8 X 1-1/4 | ASD120-R75B99-1/4 ASD180-R75B99-1/4 | 69014192773 69014192774 | 6 X 1/2 X 1-1/4 | ASD120-R75B99-1/8 ASD150-R75B99-1/8 | 69014191697 69014191698 | 6 X 1/2 X 1-1/4 | ASD120-R75B99-1/4 ASD220-R75B99-1/4 ASD320-R75B99-1/4 | 69014192777 69014192779 69014192780 | 6 X 1/2 X 1-1/4 | SD120-R100B99-1/8 SD150-R100B99-1/8 SD180-R100B99-1/8 | 66260273557 69014191699 69014191700 | 6 X 1/2 X 1-1/4 | SD150-R100B99-1/4 | 66260273561 | 7 X 1/4 X 1-1/4 | ASD150-R50B99-1/8 | 66260299216 | 7 X 1/4 X 1-1/4 | ASD150-R75B99-1/8 | 69014191701 | 7 X 1/4 X 1-1/4 | SD100S-R100B99-1/8 SD120-R100B99-1/8 SD150-R100B99-1/8 SD180-R100B99-1/8 SD220-R100B99-1/8 | 69014192210 69014191702 69014191703 69014191704 69014191705 | 7 X 1/4 X 1-1/4 | SD120-R100B99-1/4 | 66260273566 | 7 X 1/4 X 1-1/4 | ASD180-R100B99-1/4 | 69014192825 | 7 X 3/8 X 1-1/4 | ASD150-R75B99-1/8 | 69014191848 | 7 X 3/8 X 1-1/4 | SD120-R100B99-1/8 SD220-R100B99-1/8 | 69014191849 69014191852 | 7 X 1/2 X 1-1/4 | ASD100-R75B99-1/8 ASD150-R75B99-1/8 ASD180-R75B99-1/8 | 69014192211 69014191853 69014192212 | 7 X 1/2 X 1-1/4 | SD120-R100B99-1/8 SD150-R100B99-1/8 SD180-R100B99-1/8 SD220-R100B99-1/8 | 69014191854 69014191855 69014191856 69014191857 | 8 X 1/4 X 1-1/4 | SD120-R100B99-1/8 | 66260273569 | 8 X 1/2 X 1-1/4 | SD150-R100B99-1/8 | 66260273574 | 10 X 1/2 X 3 | ASD120-R75B99-1/8 ASD180-R100B99-1/8 | 69014192305 69014192306 | 12 X 1/2 X 3 | ASD150-R75B99-1/8 | 69014192310 | 12 X 1/2 X 5 | ASD150-R75B99-1/8 | 69014192311 | 12 X 1 X 3 | ASD120-R75B99-1/8 | 69014192312 | 12 X 1 X 5 | ASD120-R75B99-1/8 | 69014192313 | 14 X 1/2 X 5 | ASD150-R75B99-1/8 | 69014192314 | 14 X 1 X 5 | ASD120-R75B99-1/8 | 69014192316 | 16 X 1 X 5 | ASD120-R50B99-1/8 | 69014192318 | 16 X 1 X 8 | ASD120-R50B99-1/8 | 69014192319 | 20 X 1 X 10 | ASD120-R75B99-1/8 | 69014192324 | 20 X 1 X 12 | ASD120-R75B99-1/8 | 69014192325 |

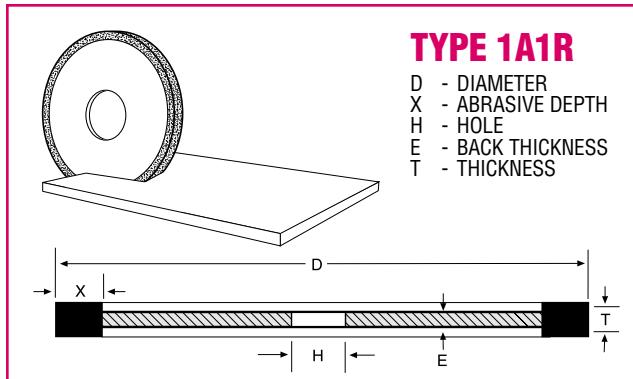
STANDARD PACKAGE = 1 WHEEL



DIAMOND AND CBN PRODUCTS

BETTER		
SIZE D X T X H	SPEC	UPC NO.
TYPE 1A1 STRAIGHT WHEELS - CBN		
1 X 1/2 X 1/4	CB120-WB99-1/8	66260273571
1-1/2 X 1/2 X 1/2	CB150-WB99-1/8	66260273572
3 X 1/8 X 3/4	CB180-WB99-1/4	66260273579
3 X 1/4 X 3/4	CB120-TB99-1/8	66260273581
4 X 1/4 X 1-1/4	CB120-WB99-1/8	66260273591
4 X 1/2 X 1-1/4	CB120-TB99-1/4	66260273593
6 X 1/16 X 1-1/4	CB120-WB99-1/8	66260273610
6 X 1/8 X 1-1/4	CB120-TB99-1/8	66260273601
6 X 1/4 X 1-1/4	CB120-TB99-1/8	66260273605
6 X 3/8 X 1-1/4	CB120-TB99-1/8	66260299215
6 X 1/2 X 1-1/4	CB100-TB99-1/8 CB120-TB99-1/8 CB150-TB99-1/8 CB180-TB99-1/8	66260273606 66260273607 66260273608 66260273556
7 X 1/4 X 1-1/4	CB120-TB99-1/8	69014192021
7 X 1/2 X 1-1/4	CB120-TB99-1/8	66260273567
10 X 1/2 X 3	CB100-TB99-1/8	66260273559
12 X 1/2 X 5	CB150-TB99-1/8	66260273560
12 X 1 X 5	CB150-TB99-1/8	66260273562
14 X 1/2 X 5	CB150-TB99-1/8	66260273563

STANDARD PACKAGE = 1 WHEEL



BETTER		
SIZE D X T X H	SPEC	UPC NO.
TYPE 1A1R CUT-OFF WHEELS - DIAMOND		
3 X .020 X 1/2 (ME104177)	M4D150-N50M99-1/8	69014192060
4 X .012 X 1/2 (ME104180)	M4D180-N75M99-1/8 M4D220-N75M99-1/8 M4D320-N75M99-1/8	69014192063 69014192064 69014192065
4 X .020 X 1/2 (ME104177)	M4D120-N100M99-1/8	69014192066
4 X .020 X 1/2 (ME104180)	M4D220-N100M99-1/8	69014192067
4 X .030 X 1/2 (ME104180)	M4D150-N75M99-1/8	69014192068
4 X 1/32 X 3/4 (ME43570)	SD100S-R100B99-1/4 SD120-R100B99-1/4	69014192151 69014191706
4 X 1/32 X 1-1/4 (ME43570)	SD100S-R100B99-1/4	69014192152
5 X .015 X 1/2 (ME104180)	M4D150-N100M99-1/8 M4D220-N100M99-1/8	69014192069 69014192070
6 X .017 X 1-1/4 (ME104180)	M4D150-N100M99-1/8 M4D220-N100M99-1/8	69014192082 69014192083
6 X .025 X 1-1/4 (ME104180)	M4D150-N100M99-1/8	69014192086
6 X 1/32 X 1-1/4 (ME89709)	SD220-R100B99-1/8	69014192154
6 X .035 X 5/8 (ME104177)	M4D100-N75M99-1/8	69014192088
6 X .035 X 1-1/4 (ME43572)	ASD120-R75B99-1/4 SD100-R75B99-1/4	69014191707 69014192155
6 X .035 X 1-1/4 (ME43572)	ASD100S-R100B99-1/4 ASD120-R100B99-1/4 SD100-R100B99-1/4 SD100S-R100B99-1/4 SD220-R100B99-1/4	69014192158 69014192159 69014191858 69014192156 69014192157
6 X .035 X 1-1/4 (ME73316)	ASD100S-R100B99-9/32 ASD120-R100B99-9/32 SD100-R100B99-9/32 SD120-R100B99-9/32 SD150-R100B99-9/32	69014192164 69014192165 69014192161 69014192162 69014192163
6 X .045 X 1-1/4 (ME83991)	SD100-R50B99-1/8	69014192166

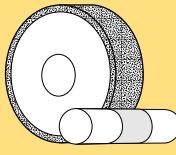
CONTINUED

Refer to "Brake Controlled Truing Devices" and "Dressing Sticks" sections for truing and dressing products.

TechTips

CYLINDRICAL GRINDING APPLICATIONS - 1A1 WHEELS:

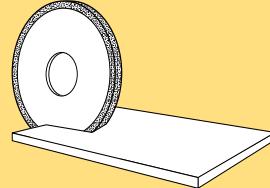
- Includes all outside grinding of round parts, even though the finished product is not always a true cylinder.
- Infeed at both ends of the traverse to keep wheel face flat.
- Use work supports to prevent deflection.
- Rough grinding traverse speed should be 1/2 to 2/3 of the thickness of the wheel per work revolution.
- Finishing grinding traverse speed should be 1/2" or less per work revolution.



CUT-OFF APPLICATIONS - 1A1R WHEELS:

- Use the largest diameter flanges possible
- Use flanges of equal diameter
- Use the thickest wheel possible for increased stiffness and straightness of cut

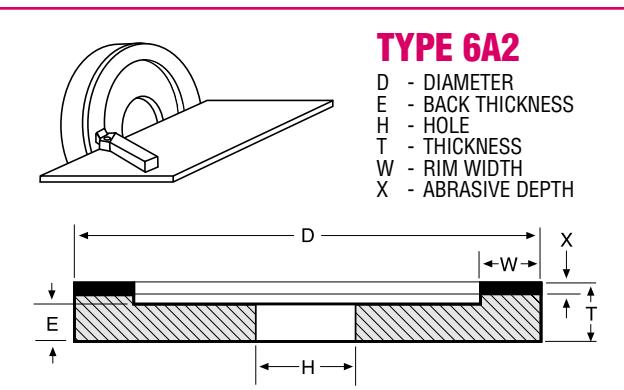
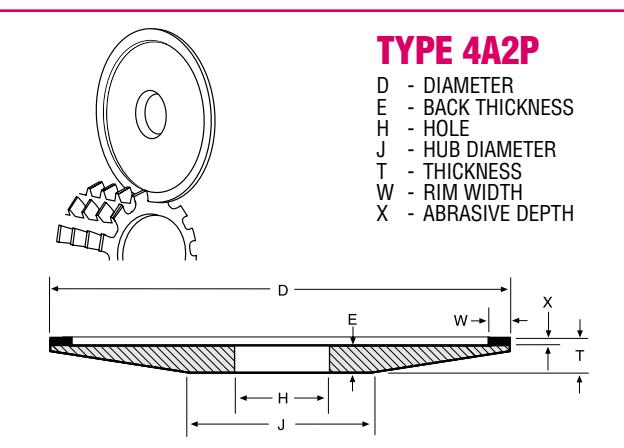
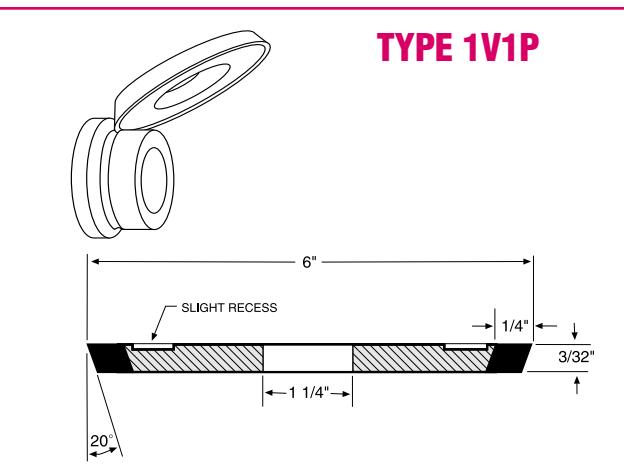
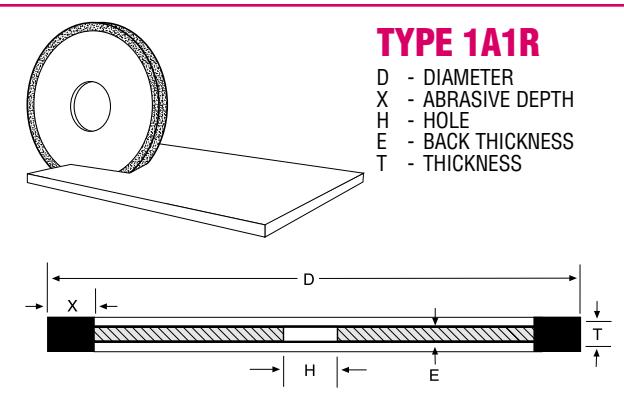
CBN wheels are used on hardened steels. Diamond wheel are used to cut or slot carbide, glass or ceramic parts.



It is the user's responsibility to refer to and comply with ANSI B7.1

DIAMOND AND CBN PRODUCTS

BETTER		
SIZE <i>D X T X H</i>	SPEC	UPC NO.
TYPE 1A1R CUT-OFF - DIAMOND (CONT'D)		
6 X .055 X 1-1/4 (ME104177)	M4D100-N75M99-1/8	69014192099
7 X .040 X 1-1/4 (ME104177)	M4D120-N75M99-1/8	69014192105
7 X .055 X 1-1/4 (ME104177)	M4D120-N100M99-1/8	69014192108
8 X .030 X 1-1/4 (ME104180)	M4D180-N75M99-1/8	69014192110
8 X .045 X 5/8 (ME43569)	SD120-R100B99-1/4	69014192167
8 X .045 X 1 (ME43569)	SD120-R100B99-1/4	69014192168
8 X .045 X 1-1/4 (ME43569)	SD120-R100B99-1/4	69014192169
8 X .050 X 1-1/4 (ME104180)	M4D180-N75M99-1/8	69014192114
8 X .055 X 1-1/4 (ME104177)	M4D46-N75M99-1/8	69014192115
10 X .050 X 1-1/4 (ME 43565)	CD100-R100B99-1/4 SD120-R100B99-1/4 SD150-R100B99-1/4	69014192815 69014192170 69014192171
10 X .050 X 3 (ME 43565)	ASD100S-R75B99-1/4	69014192172
10 X .060 X 5/8 (ME 104177)	M4D120-N50M99-1/8	69014192122
12 X .060 X 1 (ME 104177)	M4D150-N75M99-1/8	69014192128
12 X .070 X 3/4 (ME 43567)	SD150-R100B99-1/4	69014192173
14 X .060 X 3/4 (ME 104177)	M4D120-N75M99-1/8	69014192134
TYPE 1A1R CUT-OFF WHEEL - CBN		
6 X .035 X 1-1/4 (ME43572)	CB100-WB99-1/4	69014192160
TYPE 1V1P FLUTING WHEEL - DIAMOND		
6 X 3/32 X 1-1/4 FACE BEVEL 1 SIDE 20 DEG/COPPER CORE (ME89562)	ASD320B-R125B99-1/4 ASDC320C-R100B99-1/4	69014192302 69014192761
TYPE 4A2P DISH WHEELS - DIAMOND		
6 X 1/4 X 1-1/4 RIM WIDTH 1/4 (ME83055)	ASD120-R75B99-1/16	69014191709
6 X 3/8 X 1-1/4 RIM WIDTH 3/16 (ME80016)	ASD120-R75B99-1/16	69014191708
6 X 3/8 X 1-1/4 RIM WIDTH 1/4 (ME88369)	ASD120-R75B99-1/16	69014192280
TYPE 6A2 STRAIGHT CUP - CBN		
6 X 3/4 X 1-1/4 RIM WIDTH 3/8 BACK 3/8 STANDARD PACKAGE - 1 WHEEL	CB150-QB99-1/16	69014192213



DIAMOND AND CBN PRODUCTS

BETTER		
SIZE D X T X H	SPEC	UPC NO.
TYPE 6A2C STRAIGHT CUP - DIAMOND		
6 X 7/16 X 1-1/4 RIM WIDTH 1 (ME640185M)	D120/140-H-MSL	66260269172
6 X 3/4 X 1-1/4 RIM WIDTH 3/4 (ME27853)	SD220-R50B99-1/16	69014191665
6 X 3/4 X 1-1/4 RIM WIDTH 3/4 (ME27853)	ASD120-R75B99-1/16	69014191860
6 X 3/4 X 1-1/4 RIM WIDTH 3/4 (ME27853)	ASD120-R75B99-1/8	69014192786
6 X 3/4 X 1-1/4 RIM WIDTH 1/2 (ME30621)	ASD120-R75B99-1/9	66260273565
6 X 3/4 X 1-1/4 RIM WIDTH 3/4 (ME27853)	RMD150-R50V99-1/16 RMD220-R50V99-1/16	69014192218 69014192219
6 X 3/4 X 1-1/4 RIM WIDTH 3/4 (ME27853)	SD150-P50V99-1/16 SD220-R50V99-1/16	69014192217 69014191623

TYPE 6A2H STRAIGHT CUP - DIAMOND

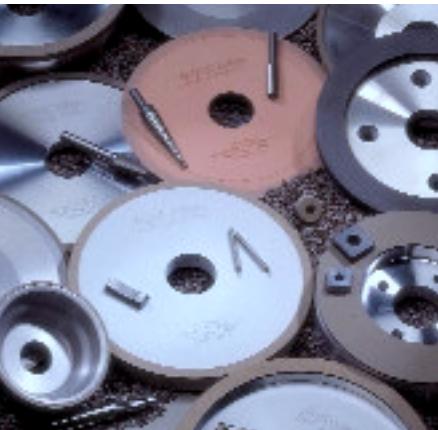
5 X 1 X 1-1/4 RIM WIDTH 1-1/16 (ME27084)	SD320-R50B99-1/16	69014192221
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TYPE 11A2 CUP WHEELS - DIAMOND

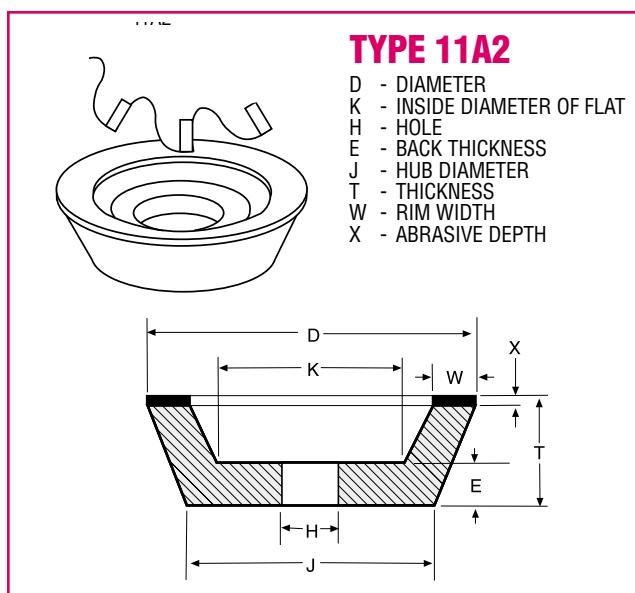
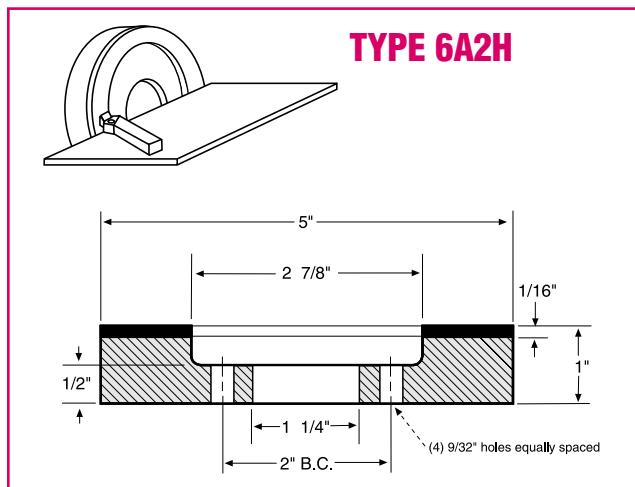
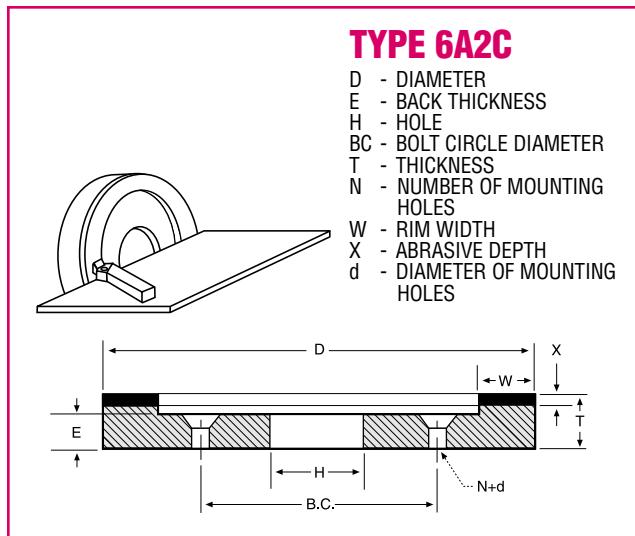
6 X 1-1/2 X 1-1/4 RIM WIDTH 1/4 (ME128467)	ASD150-R100B99-1/4	69014192799
6 X 1-11/16 X 1-1/4 RIM WIDTH 3/8 (ME101095)	ASD150-R100B99-1/4	69014192296

STANDARD PACKAGE = 1 WHEEL

**CAN'T FIND YOUR SPECIFICATION HERE?
REFER TO OUR B99 EXPRESS MADE-TO-
ORDER WHEELS SERVICE**



The Norton B99 Express line is designed to offer you up to 65,000 made-to-order choices of resin bond Diamond and CBN wheels. Almost all popular sizes are offered. Size and shape availability are shown in the Norton Superabrasives Products Publication No. 127. B99 Express wheels will ship in two weeks or less from the date the order is received by Norton.



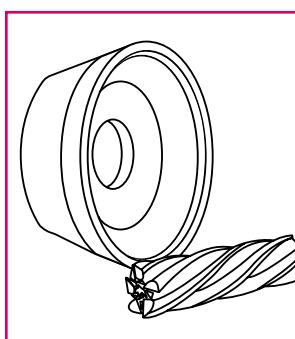
**Refer to "Brake Controlled Truing Devices" and "Dressing Sticks"
sections for truing and dressing products.**

DIAMOND AND CBN PRODUCTS

BEST		ASD Diamond / B105 Bond - Ideal for dry grinding carbide tools	
FEATURES		BENEFITS	
• Premium quality diamond		• Produces keen cutting tools that hold their shape, are easier to sharpen and require fewer reconditionings	
• Advanced, heat-reducing bond		• Minimizes heat generation and thermal damage to tool	
• Self-lubricating bond		• Increases tool life and productivity	
• Unique self-dressing core		• Lasts more than 2X as long as standard diamond wheels	
		• Lowest total wheel costs; highest productivity	
		• No steel or braze loading	
		• Uses less power	
		• Eliminates wheel core damage	
		• Eliminates downtime to dress core	

SIZE DXT X H	BEST		BETTER	
	SPEC	UPC NO.	SPEC	UPC NO.
TYPE 11V9 CUP WHEELS - DIAMOND				
3 X 1-1/4 X 3/4 INSERT LENGTH 3/8 (ME93912)			ASD120-R75B99-1/16 ASD150-R75B99-1/16 SD150-R100B99-1/16	69014192291 69014192292 69014192293
3-3/4 X 1-1/2 X 3/4 INSERT LENGTH 3/8 (ME92192)			ASD120-R75B99-1/16	69014192022
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)	ASD100S-R75B105-1/16 ASD120-R75B105-1/16 ASD150-R75B105-1/16	69014191904 69014191905 69014191906	ASD120-R75B99-1/16 ASD150-R75B99-1/16 ASD180-R75B99-1/16 ASD220-R75B99-1/16	69014191660 69014191725 69014191658 69014192363
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)			ASD150C-R50B99-1/8	69014190751
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)	ASD100S-R75B105-1/8 ASD120-R75B105-1/8 ASD150-R75B105-1/8	69014191908 69014191909 69014191910	ASD100S-R75B99-1/8 ASD120-R75B99-1/8 ASD150-R75B99-1/8 ASD180-R75B99-1/8	69014191653 69014191652 69014191651 69014191650
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)			SD120-R100B99-1/16 SD150-R100B99-1/16 SD180-R100B99-1/16 SD220-R100B99-1/16 SD320-R100B99-1/16	69014191657 69014191656 69014191655 69014191654 69014192814
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)			SD100S-R100B99-1/8 SD120-R100B99-1/8 SD150-R100B99-1/8 SD180-R100B99-1/8 SD220-R100B99-1/8	69014192427 69014191649 69014191648 69014191647 69014191646
5 X 1-3/4 X 1-1/4 INSERT LENGTH 7/16 (ME98298)	ASD120-R75B105-1/16 ASD150-R75B105-1/16	69014191913 69014191914	ASD100S-R75B99-1/16 ASD120-R75B99-1/16 ASD150-R75B99-1/16 ASD180-R75B99-1/16	69014191645 69014191644 69014191643 69014191642
5 X 1-3/4 X 1-1/4 INSERT LENGTH 7/16 (ME98298)	ASD100S-R75B105-1/8 ASD120-R75B105-1/8 ASD150-R75B105-1/8	69014191916 69014191917 69014191918	ASD100S-R75B99-1/8 ASD120-R75B99-1/8 ASD150-R75B99-1/8 ASD180-R75B99-1/8 ASD320-R75B99-1/8	69014191637 69014191636 69014191635 69014191634 69014192810
5 X 1-3/4 X 1-1/4 INSERT LENGTH 7/16 (ME98298)			SD120-R100B99-1/16 SD150-R100B99-1/16 SD180-R100B99-1/16 SD220-R100B99-1/16	69014191641 69014191640 69014191639 69014191638
5 X 1-3/4 X 1-1/4 INSERT LENGTH 7/16 (ME98298)			SD150-R100B99-1/8 SD180-R100B99-1/8	69014191632 69014191631

STANDARD PACKAGE = 1 WHEEL



DIAMOND AND CBN PRODUCTS

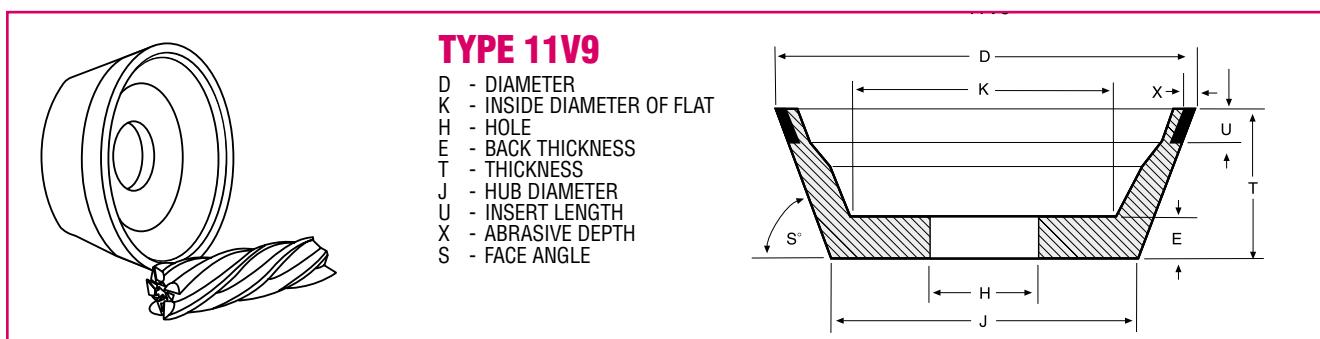
BEST	Norton Aztec CBN Wheels - Ideal for dry tool resharpening
FEATURES	BENEFITS
• Consistent high quality CBN abrasive	• 85% longer life than standard CBN wheels
• Advanced heat-reducing bond conducts heat away from the workpiece	• Eliminates heat build-up and damage • Extends wheel life • Freer cutting action • Maintains cutting tool steel integrity • Extends cutting tool life
AZTEC III	
• Lubricating bond	• Eliminates steel and braze loading • Reduces drag • Allows greater infeeds
AZTEC .007	
• Allows increased infeed (start at .007)	• High stock removal rate • Heaviest cuts with less wheel wear • Lower grinding forces • Elimination of chatter

SIZE <i>D X T X H</i>	BEST		BETTER	
	SPEC	UPC NO.	SPEC	UPC NO.
TYPE 11V9 CUP WHEELS - CBN				
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)	AZTEC .007-100-1/16 AZTEC .007-150-1/16 AZTEC III 100T-1/16 AZTEC III 120T-1/16 AZTEC III 150T-1/16	69014195683 69014195679 69014191832 69014191833 69014191834	CB100-TB99-1/16 CB120-TB99-1/16	69014191719 69014192019
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)	AZTEC .007-100-1/8 AZTEC .007-150-1/8 AZTEC III 100T-1/8 AZTEC III 120T-1/8 AZTEC III 150T-1/8	69014195684 69014195680 69014191838 69014191839 69014191840	CB100-TB99-1/8 CB120-TB99-1/8 CB150-TB99-1/8	69014191722 69014191723 69014191724
3-3/4 X 1-1/2 X 1-1/4 INSERT LENGTH 3/8 (ME92192)	AZTEC III 100W-1/16 AZTEC III 120W-1/16 AZTEC III 150W-1/16	69014191835 69014191836 69014191837	CB120-WB99-1/16 CB150-WB99-1/16	69014191720 69014191721
5 X 1-3/4 X 1-1/4 INSERT LENGTH 7/16 (ME98298)	AZTEC .007-100-1/16 AZTEC .007-150-1/16 AZTEC III 100T-1/16 AZTEC III 120T-1/16 AZTEC III 150T-1/16	69014195685 69014195681 69014191841 69014191842 69014191843	CB100-TB99-1/16 CB120-TB99-1/16 CB150-TB99-1/16	69014191711 69014192299 69014192300
5 X 1-3/4 X 1-1/4 INSERT LENGTH 7/16 (ME98298)	AZTEC .007-100-1/8 AZTEC .007-150-1/8 AZTEC III 100T-1/8	69014195686 69014195682 69014191844	CB120-TB99-1/8 CB150-TB99-1/8	69014191715 69014191716

STANDARD PACKAGE - 1 WHEEL



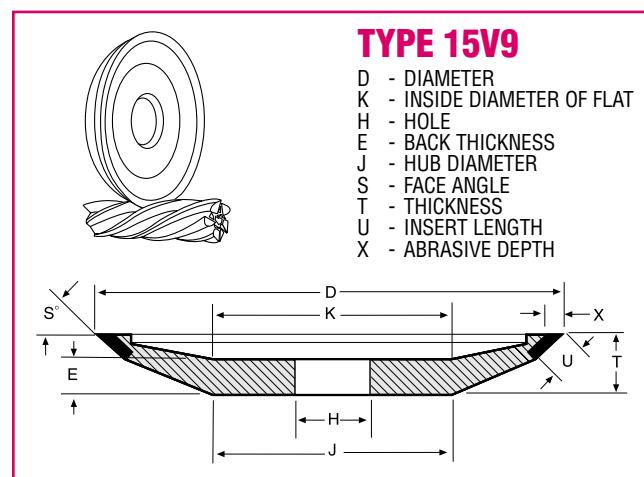
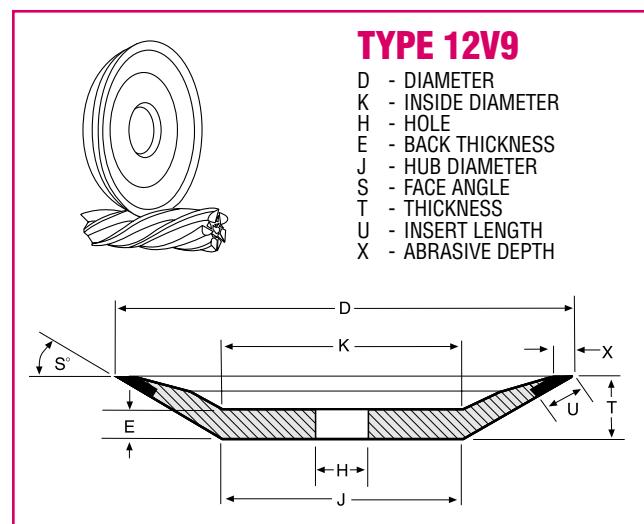
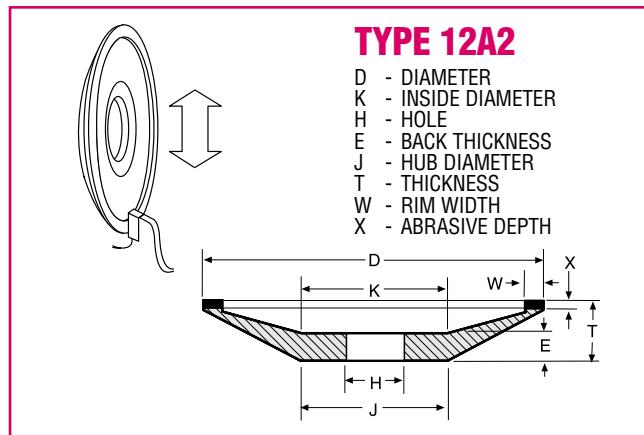
Refer to "Brake Controlled Truing Devices" and "Dressing Sticks" sections for truing and dressing products.



DIAMOND AND CBN PRODUCTS

BETTER		
SIZE DX TX H	SPEC	UPC NO.
TYPE 12A2 DISH WHEELS - DIAMOND		
4 X 1/2 X 1-1/4 RIM WIDTH 3/16 (ME65024)	ASD150-R75B99-1/8	69014192224
4 X 1/2 X 1-1/4 RIM WIDTH 1/4 (ME40745)	SD180-R75B99-1/8	69014192223
6 X 1 X 1-1/4 RIM WIDTH 3/16 (ME27758)	ASD120-R75B99-1/8 ASD180-R75B99-1/8	69014191630 69014192226
TYPE 12A2 DISH WHEEL - CBN		
6 X 1 X 1-1/4 RIM WIDTH 3/16 (ME27758)	CB120-TB99-1/16	69014192227
TYPE 12V9 DISH WHEELS - DIAMOND		
3 X 7/16 X 3/4 INSERT LENGTH 7/16 (ME41755)	SD150-R100B99-1/16	69014192228
4 X 1/2 X 1-1/4 INSERT LENGTH 1/4 (ME58734)	SD180-R100B99-1/8	69014191629
6 X 3/4 X 1-1/4 INSERT LENGTH 3/8 (ME48666)	ASD150-R75B99-1/16	69014191628
TYPE 12V9 DISH WHEELS - CBN		
4 X 1/2 X 1-1/4 INSERT LENGTH 1/4 (ME58734)	CB120-TB99-1/8	69014192229
6 X 3/4 X 1-1/4 INSERT LENGTH 3/8 (ME48666)	CB120-TB99-1/8 CB150-TB99-1/8	69014192020 69014192784
6 X 3/4 X 1-1/4 INSERT LENGTH 5/8 (ME128358)	CB150-WB99-7/32	69014192818
TYPE 15V9 DISH WHEELS - DIAMOND		
6 X 3/4 X 1-1/4 INSERT LENGTH 3/8 (ME40633)	SD100-R100B99-1/8 SD150-R100B99-1/16 SD220-R100B99-1/16	66260273564 69014192230 69014192231
TYPE 15V9 DISH WHEELS - CBN		
6 X 3/4 X 1-1/4 INSERT LENGTH 3/8 (ME40633)	CB100-WB99-1/16	69014192232
6 X 3/4 X 1-1/4 INSERT LENGTH 3/8 (ME40633)	CB150-WB99-1/8	69014192785

STANDARD PACKAGE = 1 WHEEL



TechTips

DIAMOND GRINDS:

- Cemented carbide
- Ceramics
- Plastics
- Abrasives
- Glass
- Fiberglass
- Stone
- Electronic components and materials

CBN GRINDS:

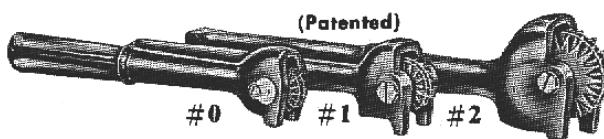
- High speed tool steels
- Hardened carbon steels
- Aerospace alloys
- Abrasion-resistant ferrous materials
- Die steels
- Alloy steels
- Hard stainless steel



It is the user's responsibility to refer to and comply with ANSI B7.1

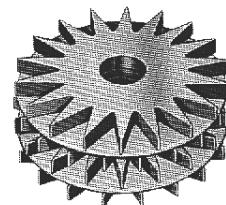
Desmond®

the only complete line of grinding wheel
DRESSERS & CUTTERS



Fulfill most general dressing needs where fast dressing is the primary requirement.

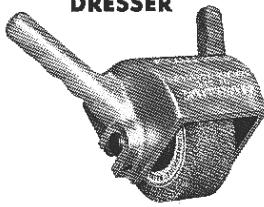
Code #	Dresser No.	For Use On Wheels	Wgt.
		Dia.	Face Lbs.
11210	0 Huntington*	Up to 10"	2 "
11310	1 Huntington	10" to 16"	3 " 2½"
11510	2 Huntington	16" to 36"	3½ " 5½ "



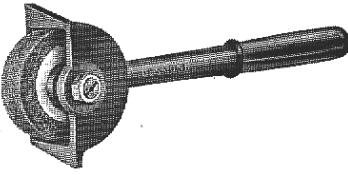
DESMOND HUNTINGTON CUTTERS

Code #	Cutter No.	Dia.	Hole	Face Width	Wgt. 10
11220	0	1¼"	¼"	.426"	1
11260	0 Paragon*	1¼"	7/16"	.426"	1
11250	0 Thin	1¼"	¼"	.426"	1
11320	1	1½"	½"	.432"	1 ¼"
11520	2**	2 3/8"	1 9/32"	.830"	6 ½"

DESMOND CRACKERJACK DRESSER



CRACKERJACK JR. DRESSER



The abrasive wheel produces a dressing and truing action when held at an angle of 15 to 30 degrees from the axis of the wheel being dressed. Full 4" diameter by 1½" face wheel mounted on double row of dust protected ball bearings. Handles designed to protect the users hands. Also made in single handle and tool post type.

Code #	Dresser Type	Wgt.
25110	Double Handle Type, Hooded	5 3/4
25120	Extra Wheel 4"x1½"x1½"	1 ¾

Crackerjack Jr. Dresser in single handle type only with 3" by 1" face wheel.

25410	Single handle dresser	
25420	Extra Wheel 3"x1"x3/4"	3/4 lb.

DESMOND DIAMOND HAND TOOLS



A quality diamond is securely mounted in a 6" long x 7/16" diameter alloy steel shank. 6" long "easy-grip" handle.

Tool No.	Approximate Carat	Tool No.	Approximate Carat
No. 74A	.25	No. 73B	.75
No. 74B	.35	No. 72A	1.00
No. 73A	.50	No. 72B	1.25

DESMOND DIAMOND NIBS



HOW TO ORDER

The straight shank nibs listed at the bottom are obtainable with any size of diamond in the range shown below. To order the nib you require, write the nib number and the diamond number. For example, if you need a nib with a 1 1/8" diameter shank, 1 1/8" long to be used on a 6" diameter wheel, order number 201-D20. (201 designates the correct nib; D20 specifies the diamond size.)

Diamond No.	Approx. Carat	For Use on Dia.	Wheels Face
D15	.20	6"	½"
D20	.25	6"	1"
D25	.35	8"	¾"
D30	.50	10"	1"
D35	.75	12"	1½"
D40	1.00	14"	1½"
D45	1.25	16"	2"
D50	1.50	18"	2"
D55	1.75	20"	2"
D60	2.00	20"	4"
D65	2.50	24"	3"
D70	3.00	24"	4"

Larger sizes also available

*Approx. Price — Billed at Actual Carat Weight

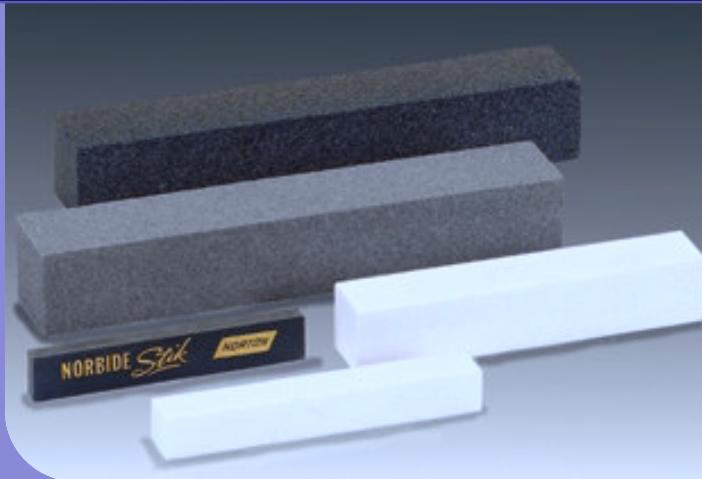
STRAIGHT SHANK DIAMOND NIBS

Nib No.	Shank Dia. in.	Length in.	Nib No.	Shank Dia. in.	Length in.
101		¾	400		7/8
102	1/4"	1	401		1
103		1 1/4	402		1 3/32
104		1 1/2	403		1 1/8
105		6	404	7/16"	1 3/8
201		1 1/8	405		1 5/8
202	5/16"	1 1/4	406		2
203		2	407		4 7/8
204		2 1/8	408		6
300		5/8	500		1 1/8
301		1 1/8	501		1 1/2
302		1	502	1/2"	2 1/4
303		1 1/2	503		4
304	5/8"	1 1/8	504		4 1/2
305		2	505		6
306		2 1/4			
307		3			
308		4			

Other sizes available at no extra cost, state dimensions.

DRESSING STICKS

Regular use of properly selected dressing sticks will help you achieve maximum performance from your diamond and CBN wheels. Selected sticks are used for truing and dressing conventional vitrified wheels.



NORBIDE HIGH PERFORMANCE STICKS

For offhand truing and dressing of medium grit, soft and medium-grade vitrified grinding wheels; Norbide and Boron Carbide are the hardest sticks you can buy. Made from boron nitride, they are well suited for dressing tool and cutting wheels 10" and smaller, especially cup and saucer shapes.

SIZE T X W X L*	STD. PKG.	SPEC	BEST	BETTER	
			UPC NO.	SPEC	UPC NO.
HIGH PERFORMANCE LONG LIFE STICKS					
3/16 X 7/16 X 3	5			BORON CARBIDE STICK	61463629472
3/16 X 1/2 X 3	5	NORBIDE STICK	61463610148		

* THICKNESS X WIDTH X LENGTH

VITRIFIED DRESSING STICKS

Aluminum Oxide (White) - Alundum

For dressing and cleaning CBN wheels; these sticks also work well for diamond wheels.

Silicon Carbide (Black) - Crystolon

Coarse grit (24) and hard-grade (R and harder) are used for dressing conventional vitrified wheels. Finer grit and softer grades are used for dressing diamond wheels.

SIZE T X W X L	STD. PKG.	BETTER	
		SPEC	UPC NO.
VITRIFIED DRESSING STICKS - A/O			
1/2 X 1/2 X 4	5	38A220-HVBE	61463610555
1/2 X 1/2 X 6	5	38A150-IVBE 38A220-HVBE	61463610303 61463610103
3/4 X 3/4 X 4	5	38A80-MVBE 38A150-HVBE 38A150-IVBE 38A220-HVBE	61463610362 61463610291 61463610368 61463610290
3/4 X 3/4 X 8	5	38A220-HVBE	61463610280
1 X 1 X 6	5	38A150-HVBE 38A150-IVBE 38A220-HVBE	61463610405 61463610453 61463610406
1 X 1 X 8	5	38A150-IVBE	61463610455

SIZE T X W X L	STD. PKG.	BETTER	
		SPEC	UPC NO.
VITRIFIED DRESSING STICKS - S/C			
1/2 X 1/2 X 6	5	37C24-SVK 37C150-KV 37C150-MV 37C220-KV	61463610285 61463610205 61463610207 61463610214
1 X 1 X 6	5	37C20-SVK 37C24-SVK 37C24-TVK 37C46-RVK 37C80-NV 37C150-KV 37C220-KV	61463610459 61463610462 61463610354 61463610466 61463610393 61463610438 61463610398
1 X 1 X 6 RETAIL CARDED	10	S/C MEDIUM GRIT	07660710466
1 X 1 X 8	5	37C24-SVK	61463610471
1 X 2 X 8	5	37C24-TVK	61463610485
2 X 2 X 8	5	37C24-SVK	61463610490
VITRIFIED ROUND DRESSING STICKS - S/C			
1/2 X 6 (DIAMETER X LENGTH)	5	37C24-SVK	61463610371
1 X 6	5	S/C VC (JT276)	61463687905

For more information on truing and dressing, please refer to the "Mounting, Truing and Dressing Guide" in the "Diamond and CBN Product" section.

DRESSING STICKS

VITRIFIED SUPERFINE STICKS

For dressing the face of superabrasive wheels.

SIZE T X W X L	STD. PKG.	SPEC	BETTER UPC NO.
VITRIFIED SUPERFINE STICKS			
1/2 X 1/2 X 6	5	NMVC320-J5VCA	61463610599
		NMVC400-J5VCA	61463650324
1 X 1 X 6	5	NMVC320-J5VCA	61463610605
		NMVC400-J5VCA	61463650450
1 X 1 X 8	5	NSA320-H8V	61463610597

OFFHAND GRINDING WHEEL DRESSING STICK AND HOLDER

This convenient metal holder is widely used by mechanics and foundry-men for truing, dressing and changing the face of the wheel. The included JT246 dressing stick - a very coarse grit silicon carbide for dressing conventional vitrified wheels - is firmly held and adjusted by the knurled control.



SIZE	DESCRIPTION	MIN./STD. PKG.	PRODUCT NO.	GOOD UPC NO.
GRINDING WHEEL DRESSING STICK & HOLDER				
1/2 X 6 ROUND	VERY COARSE S/C ROUND DRESSING STICK	5/10	JT246	61463687900
10 OVERALL	DRESSING STICK HOLDER	5/10	H6	61463687895

SpecCheck



Selecting the appropriate dressing stick for each application depends on the wheel size, type, speed, specification and grit size, as well as the material being worked. Initial starting specifications are listed below. We recommend testing several sticks to find the best one for your application.

STARTING RECOMMENDATIONS FOR DRESSING WHEELS

SUPERABRASIVE WHEELS	VITRIFIED STICK
PRODUCT	SPECIFICATION
RESIN AND VITRIFIED BOND	
- 80, 100 and 120 grit	Dressing Stick 38A150-HVBE
- 150, 180 and 220 grit	Dressing Stick 38A220-HVBE
- 320 and finer grits	Superfine Stick NMVC400-J5VCA
METAL BOND	
- 80, 100 and 120 grit	Dressing Stick 37C80-NV
- 150, 180 and 220 grit	Dressing Stick 37C150-KV
- 240 and finer grits	Dressing Stick 37C220-KV
CONVENTIONAL VITRIFIED WHEELS	
VITRIFIED BOND	
- 46 grit and finer and M grade and softer	High Performance or Dressing Stick 37C24-SVK
Dressing Diamond and CBN Wheels	
Resin and Vitrified Bond, Diamond and CBN Wheels	
• Choose a dressing stick one or two grit sizes finer than the abrasive in the wheel – in a soft grade (H or I).	

TechTips

Dressing Diamond and CBN Wheels

Resin and Vitrified Bond, Diamond and CBN Wheels

- Choose a dressing stick one or two grit sizes finer than the abrasive in the wheel – in a soft grade (H or I).

Metal Bond, Diamond and CBN Wheels

- Choose a stick the same grit size or one grit size coarser than the abrasive in the wheel – in a medium grade (K–M).



It is the user's responsibility to refer to and comply with ANSI B7.1

DRESSING STICKS

DRESSING STICKS FOR DIAMOND VITRIFIED VRF BOND WHEELS

These aluminum oxide dressing sticks are specifically formulated to properly dress VRF wheels, a product used to produce a superior cutting edge on PCD and PCBN inserts. These also work well on any competitive PCD grinding wheel.

		BETTER	
SIZE	STD. PKG.	SPECIFICATION	UPC
1 X 1 X 6	5	PCD COARSE	61463647865
		PCD MEDIUM	61463647866
		PCD FINE	61463647867

SpecCheck

Selecting the appropriate dressing stick for each application depends on the wheel size, type, speed, specification and grit size, as well as the material being worked. Initial starting specifications are listed below. We recommend testing several sticks to find the best one for your application.

STARTING RECOMMENDATIONS FOR DRESSING VRF BOND WHEELS

PRODUCT	DESCRIPTION
Roughing	Dressing Stick PCD Coarse
Roughing/Intermediate	Dressing Stick PCD Medium
Finishing/Chip-Free Edges	Dressing Stick PCD Fine

RUBBER FINISHING STICKS

These sticks are used for manual or mechanical honing on machines where they are mounted in holders or fixtures. Intended for use where precision dimensional limits and grade controls are required, such as die polishing.

		BETTER	
SIZE T X W X L	MIN./ STD. PKG.	SPEC.	UPC NO.
1/2 X 1/2 X 6	5/20	57A120-B2RR	61463610608
1/2 X 1 X 6	5/20	57A120-B2RR	61463610609

FASTTRACK MADE-TO-ORDER MICROABRASIVE STICKS

Superfinishing blank stock encompasses a wide range of different specifications. These blanks can be finished to your dimensional requirements within two weeks of Norton's receipt of your order. Small lots, for test purposes, can be express shipped.

APPLICATIONS	ABRASIVE TYPE - BOND	GRIT RANGE	TREATMENT TYPE
Superfinishing, Finishing and Dressing	NLA - V NMVC - VCA NSA - V	240 - 1200	Sulfur, Wax
Honing	SG - VS SGG - VS1	54 - 220	Sulfur, Wax



SHARPENING STONES



HAND FINISHING

Since 1823, Norton has been the leading supplier of benchstones, files, slips and rubbing bricks. Our comprehensive line of sharpening and finishing stones delivers the superior performance you want.

Typical Applications

- Deburring
- Dimensioning
- Sharpening
- Honing
- Rubbing



SpecCheck

APPLICATION GUIDE AND PAGE INDEX

BENCHSTONES – PAGES 180-185

APPLICATION	COARSE/MEDIUM SHARPENING	FINE STONING	FINISH HONING
Chip Breakers	-	Fine Crystolon Benchstone	-
Draw Knives	Coarse Crystolon Benchstone	Fine India Bench Stone	Hard Arkansas Benchstone
Scrapers	Coarse Crystolon Benchstone	Fine India Bench Stone	Hard Arkansas Benchstone
Chisels (Wood)	Coarse Crystolon Benchstone Waterstone	Fine India Bench Stone Waterstone	Hard Arkansas Benchstone Waterstone
Plane Blades	Coarse Crystolon Benchstone Waterstone	Fine India Bench Stone Waterstone	Hard Arkansas Benchstone Waterstone

SLIPS – PAGES 190-191

APPLICATION	COARSE/MEDIUM SHARPENING	FINE STONING	FINISH HONING
Milling Cutter	Medium India Round Edge Slip	Fine India Round Edge Slip	-
Carbide Tools	Coarse or Medium Crystolon Slip for Carbide Tools	Fine Crystolon Slip for Carbide Tools	-
Carving Tools	Medium India Carving Tools Slip	Hard Arkansas Carving Tool Slip	Arkansas Carving Tool Slip

RUBBING BRICKS – PAGE 193

TOOL/MATERIAL	COARSE/MEDIUM SHARPENING	FINE STONING	FINISH HONING
Castings (scouring)	Crystolon Plain Rubbing Brick	-	-
Mold Marks (removing)	Crystolon Fluted Rubbing Brick	-	-
Magnetic Chucks	Crystolon Round Benchstone	India Round Benchstone	-

ABRASIVE FILES – PAGES 185-189, 191

APPLICATION	COARSE/MEDIUM SHARPENING	FINE STONING	FINISH HONING
Form Cutter	Coarse or Medium India Knife Blade	Fine India Knife Blade	-
Gouges (Wood)	-	India Gouge Sharpening Stone	-
Jointer Knives	Crystolon Jointer Stone	India Jointer Stone	Hard Arkansas Flat File
Keyways	Coarse or Medium India Square File	Fine India Square File	-
Lathe Bits	Medium India Square File	Fine India Square File	-
Radius Tools	Medium India Round File	Fine India Round File	-
Reamers	Medium India Reamer Stone	Fine India Reamer Stone	-
Router Bits	-	Fine India Square File	-
Saws	Coarse India Taper Triangle	Fine India Tapered Triangle	-
Center Punches	Medium India Triangular File	Fine India Triangular File	-
Moulding Cutters*	Coarse or Medium India File	Fine India File	-
Countersinks	Coarse India Triangular File	Fine India Triangular File	Hard Arkansas Triangular File
Auger Bits	Medium India Auger Bit Stone	Fine India Auger Bit Stone	-
Tap Threads	-	Fine India Triangular File	-

* SELECT SHAPE TO FIT CONFIGURATION

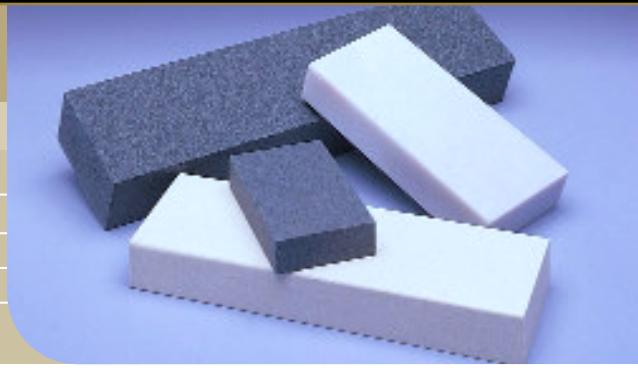
SHARPENING STONES

BENCHSTONES

Typical Applications

Restoring the cutting edge on straight edged tools:

- Chisels • Plane blades
- Wood lathe cutters • Draw knives
- Spoke shaves • Knives
- Precision tools and delicate instruments



SINGLE GRIT ABRASIVE BENCHSTONES

BETTER Single Grit Abrasive Benchstones	
FEATURES	BENEFITS
• Crystolon – Premium silicon carbide abrasive	• Fast cutting stone; ideal for general sharpening of cutting tools • Fast stock removal for quick edge shaping with minimal loading
• India – Smooth cutting aluminum oxide abrasive, Norton's trademark for a fine finish	• Long lasting cutting edge • The choice of artisans, craftsmen and mechanics • Ideal for clean deburring, generating keen edges and quality finishes
• Arkansas – Natural premium Novaculite quarried in Arkansas and available in soft and hard	• Sharpest possible razor edges • Near mirror finishes • Use for finer honing after India stone
• Clear Creek (Ohio Bluestone) – Soft grade natural stone quarried in Ohio	• Produces finely honed edges and excellent finishes

BETTER					
SIZE <i>L X W X H</i>	MIN./ STD. PKG.	SPEC	PRODUCT NO.	UPC NO.	
SINGLE GRIT ABRASIVE BENCHSTONES					
4 X 1 X 1/4	1/5	CRYSTOLON, COARSE CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CJB14 MJB14 FJB14 CB14 MB14 FB14	61463685470 61463685465 61463685460 61463685580 61463685575 61463685570	
4 X 1 X 1/2	1/5	CRYSTOLON, COARSE CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CJB24 MJB24 FJB24 CB24 MB24 FB24	61463685485 61463685480 61463685475 61463685595 61463685590 61463685585	
4 X 1-7/8	1/5	HARD ARKANSAS, ULTRA FINE (W/ WOOD BOX)	HM4	61463685925	
4 X 2 X 3/4	1/5	SOFT ARKANSAS, EXTRA FINE HARD ARKANSAS, ULTRA FINE	SB4 HB4	61463685670 61463685655	
5 X 2 X 5/8	1/5	CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, MEDIUM INDIA, FINE	MJB35 FJB35 MB35 FB35	61463685495 61463685490 61463685605 61463685600	
6 X 1-7/8	1/5	HARD ARKANSAS, ULTRA FINE (W/ WOOD BOX)	HM6	61463685930	
6 X 2 X 3/4	1/5	SOFT ARKANSAS, EXTRA FINE HARD ARKANSAS, ULTRA FINE	SB6 HB6	61463685675 61463685660	
6 X 2 X 1	1/10	CLEAR CREEK MEDIUM (OHIO BLUESTONE) CLEAR CREEK MEDIUM (OHIO BLUESTONE)	KB6 KB8	61463685725 61463685730	
	1/5	CRYSTOLON, COARSE CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CJB6 MJB6 FJB6 CB6 MB6 FB6	61463685510 61463685505 61463685500 61463685620 61463685615 61463685610	
8 X 1-7/8	1/5	HARD ARKANSAS, ULTRA FINE (W/ WOOD BOX)	HM8	61463685935	
8 X 2 X 3/4	1/5	SOFT ARKANSAS, EXTRA FINE HARD ARKANSAS, ULTRA FINE	SB8 HB8	61463685680 61463685665	
8 X 2 X 1	1/5	CRYSTOLON, COARSE CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CJB8 MJB8 FJB8 CB8 MB8 FB8	61463685525 61463685520 61463685515 61463685635 61463685630 61463685625	



TechTip

■ Use Norton oil to optimize the performance of Crystolon, India and Arkansas stones.

! It is the user's responsibility to refer to and comply with ANSI B7.1

SHARPENING STONES

SHARPENING STONES

BENCHSTONES (CONTINUED)

COMBINATION GRIT ABRASIVE BENCHSTONES

BETTER Combination Grit Abrasive Benchstones	
FEATURES AND APPLICATIONS	
Crystolon Combination	
Coarse and fine grit sharp-cutting silicon carbide abrasive surfaces for general sharpening when the speed of sharpening is more important than the fineness of the cutting edges. Gray in color.	
Crystolon-India Combination	
Fast-cutting medium grit silicon carbide (Crystolon) and fine aluminum oxide (India) abrasive surfaces for keen, long-lasting edges on quality tools. Crystolon side dark gray in color, India side is orange.	
India Combination	
Coarse and fine grit aluminum oxide abrasive surfaces produce strong, keen, long-lasting edges on quality tools. Orange/brown in color.	
India-Soft Arkansas Combination	
Coarse grit aluminum oxide and extra fine grit soft Arkansas surfaces for start-to-finish sharpening and honing. Preferred by woodworkers for sharpening straight blades and gouges. India side is brown; Arkansas side off-white.	
Crystolon Cutler's Stone	
Coarse and extra fine grit silicon carbide surfaces. This fast-cutting stone is used to sharpen large edge tools to moderate tolerances. Dark gray in color.	
Giant Combination	
Two grit surfaces in a single large stone for long, sweeping strokes: Crystolon for fast sharpening, aluminum oxide (India) for longer-lasting cutting edges, or a combination of both abrasives.	

		BETTER		
SIZE L X W X H	MIN./ STD. PKG.	SPEC	PRODUCT NO.	UPC NO.
COMBINATION GRIT ABRASIVE BENCHSTONES				
4 X 1 ROUND	1/5	CRYSTOLON, COARSE/FINE INDIA, COARSE/FINE	JB64 IB64	61463685435 61463685545
4 X 1-3/4 X 5/8	1/5	CRYSTOLON, COARSE/FINE INDIA, COARSE/FINE	JB134 IB134	61463685440 61463685550
5 X 2 X 3/4	1/5	CRYSTOLON, COARSE/FINE INDIA, COARSE/FINE	JB45 IB45	61463685445 61463685555
6 X 2 X 1	1/5	CRYSTOLON, COARSE/FINE CRYSTOLON-INDIA, MEDIUM/FINE INDIA, COARSE/FINE INDIA-SOFT ARKANSAS, COARSE/EXTRA FINE	JB6 IC6 IB6 SIB6	61463685450 61463685643 61463685560 61463685700
7 X 2 X 1	1/2	INDIA-SOFT ARKANSAS REVERSIBLE, MEDIUM/EXTRA FINE INDIA-HARD ARKANSAS REVERSIBLE, FINE/ULTRA FINE	SIB27 HIB27	61463685860 61463685865
8 X 2 X 1	1/5	CRYSTOLON, COARSE/FINE INDIA, COARSE/FINE	JB8 IB8	61463685455 61463685565
11-1/2 X 2-1/2 X 1 GIANT COMBINATION	1/2	CRYSTOLON, COARSE/FINE CRYSTOLON-INDIA, MEDIUM/FINE INDIA, COARSE/FINE	JUM3 IC11 IM2	61463685840 61463687239 61463685851
12 X 2-1/2 X 1-1/2	1/2	CRYSTOLON CUTLER'S STONE, COARSE/EXTRA FINE	JUM4	61463685855



SHARPENING STONES

BENCHSTONES (CONTINUED)

BENCHSTONE STATIONS

BETTER Benchstone Stations

FEATURES AND BENEFITS

Multi-Oilstone Sharpening Stations

The Multi-Oilstone contains three oil-filled stones. Ideal for general sharpening and honing large straight edge tools. The stone length permits long, sweeping strokes. The coarse Crystolon stone quickly restores badly worn cutting edges; the medium Crystolon stone produces the average edge needed for many tools; the fine India stone hones to a sharper edge. The heavy base has a non-skid bottom. A pint can of Norton oil is included. A favorite of chefs and butchers.

3-In-1 Tool & Knife Sharpening Systems

Designed for general sharpening, the IM100 is a mini version of the Multi-Oilstone...containing coarse Crystolon, medium Crystolon, and fine India stones. The IM101, designed to produce the finest edges possible, contains fine India, Soft Arkansas, and Hard Arkansas stones. Both of which come complete with instructions and a 4 ounce container of Norton Oil.

Professional Sharpening System IM200

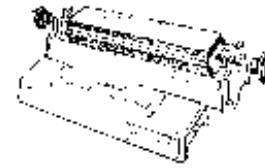
This system contains three oilstones in coarse, medium and fine grits, attached to a rotatable center securely positioned in a stable base, allowing long, sweeping strokes - to sharpen even large knives. The base of this strong, ABS plastic system has an oil reservoir. Also includes 4-1/2 oz. of Norton oil, an instruction sheet and an angled wedge to ensure the proper sharpening angle.

Benchstone Workbench Box IM50

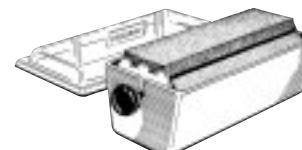
This Norton Pike embossed box is constructed of durable, ABS plastic. It is workbench-mountable with non-slip rubber feet, to securely hold 6 x 2 x 1" or 8 x 2 x 1" stones when sharpening and provide clean storage when not in use.

BETTER

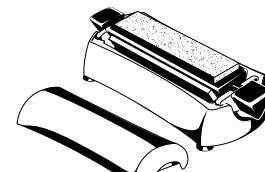
SIZE L X W X H	MIN./ STD. PKG.	SPEC	PRODUCT NO.	UPC NO.
MULTI-OILSTONE SHARPENING SYSTEM				
11-1/2 X 2-1/2 X 1/2 (STONE SIZE)	1/1 1/2	MULTI-OILSTONE, COARSE/MED/FINE REPLACEMENT STONE - CRYSTOLON, COARSE REPLACEMENT STONE - CRYSTOLON, MEDIUM REPLACEMENT STONE - INDIA, FINE	IM313 JM3 JM6 IM9	61463685960 61463685980 61463685975 61463685970
3-IN-1 TOOL & KNIFE SHARPENING SYSTEMS				
6 X 2 X 1/2 (STONE SIZE)	1/5	3-IN-1 SHARPENER, COARSE/MED/FINE 3-IN-1 SHARPENER, FINE/EXTRA FINE/ULTRA FINE REPLACEMENT STONE — CRYSTOLON, COARSE REPLACEMENT STONE — CRYSTOLON, MEDIUM REPLACEMENT STONE — INDIA, FINE	IM100 IM101 JM31 JM61 IM91	61463685356 61463685357 61463685352 61463685350 61463685348
IM200 PROFESSIONAL SHARPENING SYSTEM				
8 X 2 X 3/8" STONES	1/1	PROFESSIONAL SHARPENING SYSTEM	IM200	61463691260
IM50 BENCHSTONE WORKBENCH STATION				
FOR 6" OR 8" STONES	1/1	BENCHSTONE WORKBENCH STATION	IM50	61463691259
STANDARD PACKAGE IS ONE SYSTEM.				



IM313 MULTI-OILSTONE SHARPENEING SYSTEM



3-IN-1 TOOL & KNIFE SHARPENING SYSTEMS



IM200 PROFESSIONAL SHARPENING SYSTEM



IM50 BENCHSTONE WORKBENCH STATION

NORTON OIL

Norton Oil is a highly refined lubricating oil specifically formulated for sharpening stone use, but equally ideal for all lubricating jobs. It will not load or "gum-up" sharpening stones. Meets U.S. Pharmacopoeia standards for mineral oil purity; it may be used around food preparation operations. XB1 is a dispenser-type can for easy use.

SIZE	MIN./ STD. PKG.	SHAPE	SPEC	PRODUCT NO.	UPC NO.
SHARPENING STONE OIL					
4-1/2 OUNCE	10/20	CAN	SHARPENING STONE OIL	XB1	61463687760
1 PINT	10/20	CAN	SHARPENING STONE OIL	XB5	61463687770
1 QUART	5/10	CAN	SHARPENING STONE OIL	XB2	61463687775



SHARPENING STONES

BENCHSTONES (CONTINUED)

PRECISION BENCHSTONES

BETTER Precision Benchstones

FEATURES AND BENEFITS

Jewelers' Benchstones

These stones are excellent for sharpening the fine, precision cutting tools of jewelers, engravers and artisans.

Penknife Precision Benchstones

Ideal for sharpening cutting tools, laboratory blades, surgical instruments, engravers' and die makers' tools, and pocket knives to the keenest edge.

BETTER

SIZE L X W X H	MIN./ STD. PKG.	SHAPE	SPEC	PRODUCT NO.	UPC NO.
JEWELERS' BENCHSTONES					
4 X 2 X 3/8	1/5	I	HARD ARKANSAS JEWELERS' STONE, ULTRA FINE	HB24	61463687525
6 X 2 X 3/8	1/5	I	HARD ARKANSAS JEWELERS' STONE, ULTRA FINE	HB26	61463687530
PENKNIFE PRECISION BENCHSTONES					
3 X 1 X 3/8	5/10	I	SOFT ARKANSAS PENKNIFE PIECE, EXTRA FINE	SB13	61463687560
			HARD ARKANSAS PENKNIFE PIECE, ULTRA FINE	HB13	61463687550
4 X 1 X 3/8	5/10	I	SOFT ARKANSAS PENKNIFE PIECE, EXTRA FINE	SB14	61463687565
			HARD ARKANSAS PENKNIFE PIECE, ULTRA FINE	HB14	61463687555



I SHAPE

WATERSTONES

BEST Waterstones – Produce superior edge for planes and straight chisels



FEATURES

BENEFITS

- System of four "Japanese-type" stones designed to work together
- Softer than traditional oilstones - providing lapping action
- Fast sharpening, fine finish
- Use with water
- Superb results with low pressure

BEST

SIZE L X W X H	MIN./ STD. PKG.	SPEC	UPC NO.
WATERSTONES			
8 X 2 X 1	1/5	220 GRIT	61463691065
		1000 GRIT	61463691066
		4000 GRIT	61463691067
		8000 GRIT	61463691068
8 X 2 X 1 SET	1	SET OF 4 STONES: 220, 1000, 4000, 8000 GRIT	61463691069
8 X 2 X 1 COMBINATION	1/5	COMBINATION 220/1000	61463691070
		COMBINATION 1000/4000	61463691071
		COMBINATION 4000/8000	61463691072
8 X 3 X 1	1/5	220 GRIT	61463689505
		1000 GRIT	61463689506
		4000 GRIT	61463689507
		8000 GRIT	61463689508
8 X 3 X 1 SET	1 SET	SET OF 4 STONES: 220, 1000, 4000, 8000 GRIT	61463624334
8 X 3 X 1 COMBINATION	1/5	COMBINATION 220/1000	61463624335
		COMBINATION 1000/4000	61463624450
		COMBINATION 4000/8000	61463624336



Made in U.S.A.

SHARPENING STONES

BENCHSTONES (CONTINUED)

DIAMOND SUPERABRASIVE SHARPENING STONES

Norton diamond sharpening stones are made using monocrystalline (single solid crystals) diamonds, nickel bonded to a solid steel substrate for fast metal removal.



BETTER Diamond Sharpening Stones – The fastest cutting stone

FEATURES	BENEFITS
<ul style="list-style-type: none"> Monocrystalline diamonds (use with water) 	<ul style="list-style-type: none"> Fastest cut Longest life
<ul style="list-style-type: none"> Diamond abrasive with a nickel bond on a core of solid steel 	<ul style="list-style-type: none"> Wear resistant, unbreakable Will not groove, cup, or hollow Holds tolerance of $\pm .002$ Effective for deburring, filing and abrading Rapid stock removal

BETTER

SIZE L X W X H	MIN./ STD. PKG.	SPEC	UPC NO.
3-1/3 X 7/8 X 3/16	1/10	EXTRA COARSE, 220 GRIT, 60 MICRON COARSE, 325 GRIT, 45 MICRON FINE, 600 GRIT, 25 MICRON EXTRA FINE, 1200 GRIT, 9 MICRON	61463690624 61463690625 61463690626 61463690627
6 X 2 X 1/4	1/5	EXTRA COARSE, 220 GRIT, 60 MICRON COARSE, 325 GRIT, 45 MICRON FINE, 600 GRIT, 25 MICRON EXTRA FINE, 1200 GRIT, 9 MICRON	61463690632 61463690633 61463690634 61463690635
11-1/2 X 2-1/2 X 3/8	1/2	EXTRA COARSE, 220 GRIT, 60 MICRON COARSE, 325 GRIT, 45 MICRON FINE, 600 GRIT, 25 MICRON EXTRA FINE, 1200 GRIT, 9 MICRON	61463690640* 61463690641* 61463690642* 61463690643*

CAN BE USED AS REPLACEMENT STONE IN IM313 MULTI-OILSTONE SHARPENING SYSTEM

SpecCheck

BENCHSTONE PERFORMANCE ATTRIBUTES

	FAST CUT	SHARPENING	HONING	SHARPEST EDGE
Grit Size	Coarse	Medium	Fine	Extra Fine
Abrasive	Diamond	Crystolon	India	Soft Arkansas
Product/Color	Silver Metallic	Grey	Orange/ Brown	Waterstone

BENCHSTONE PRODUCT COST GUIDE

LOWEST PRICE				HIGHEST PRICE
Crystolon	Waterstone	Soft Arkansas	Hard Arkansas	Diamond
India				

SpecCheck

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	CORRECTION
Clogging, glazing or loading of the stone surface	Insufficient lubrication to suspend residue	Saturate the stone surface with Norton oil
Excessive metal removal from tool edge	Stone is too coarse Stone is too soft	Use a finer grit Use a different type (abrasive)
Tool edge breaks down quickly	Poor quality steel Edge too thin	Use higher quality tool Correct edge angle to duplicate original edge angle (knives = 15° to 20°)
Tool edge not sharp enough	Stone is too coarse	Hone with finer grit or choose an India or Arkansas abrasive
Tool doesn't cut properly (straight edge tools)	Check for correct bevel angle Check for wire edge Edge out of true (rounded corners)	Change bevel angle to duplicate original edge angle Remove wire edge by running across a piece of hardwood once or twice Vertically pass tool over benchstone to square corners

TechTips

CHOOSE ONE OR A SEQUENCE OF BENCHSTONES TO RESTORE A CUTTING EDGE..

■ Use oil

- For best benchstone performance to keep stones free cutting, with no loading or gumming, use stones with oil.
- If stones do gum-up or load, clean with kerosene.

■ Use of stones on flat tools

- Flat-bladed tools require flat stones. All benchstones (except diamond) can be flattened by rubbing on waterproof sandpaper against a flat surface.

■ Use of stones on round or shaped tool

- Shaped tools require shaped stones.
- Select an appropriately-shaped abrasive file or slip.

■ Maintain correct tool edge bevel angle

- Many knives and tools have 2 bevels:
- The blade bevel (the back of the edge), once correctly set, is seldom sharpened.
- The edge bevel does the cutting - and requires sharpening to 15 to 20 degrees.
- Too acute an edge bevel will weaken, dull quickly and breakdown.
- Too obtuse edge bevel will not cut properly.

■ The final step

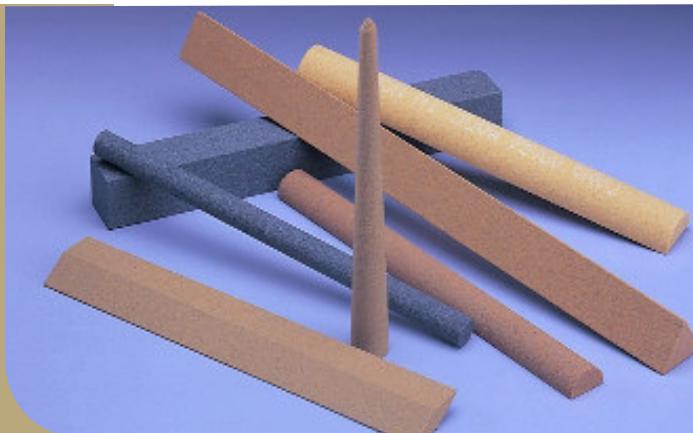
- Sharpening often leads to a minute burr (wire edge) on the tool.
- Remove this by "stropping" the tool on leather or hard wood for the best cutting edge.



It is the user's responsibility to refer to and comply with ANSI B7.1

ABRASIVE FILES

Norton abrasive files hold their shape while imparting the finest, most uniform finish on precision machine parts and in tool and die making. Abrasive files are ideal for any deburring, chamfering or radiusing job, or for fitting delicate parts. Select the file shape that matches the contour of the surface being stoned.



BETTER Abrasive Files

FEATURES AND BENEFITS

Crystolon Files

Fast-acting silicon carbide products, Crystolon files are designed for use where moderate tolerances are acceptable.

India Files

India files are ideal when a close tolerance is more important than the speed of cut.

Hard Arkansas Files

Hard Arkansas has an ultra fine grit that produces the finest edge possible while maintaining tolerances unequalled by any other abrasive file. It will also produce a highly polished finish.

SHARPENING STONES

ABRASIVE FILES (CONTINUED)

SQUARE FILES

Square file applications range from dimensioning keyways to maintain fit, stoning faces on router bits, touching-up edges of reamer teeth, and lapping/honing to close tolerances to produce the finest edge on precision instruments, die work and delicate tools.



TRIANGULAR FILES

Triangular Files are used for a variety of deburring, chamfering and radiusing applications including cleaning tap threads, stoning cutting surfaces of milling cutters, lapping honing tools, dies and molds, and putting precision points on center punches.

The India line also offers Tapered Triangles...used by mechanics and tool and die makers to impart the correct edge in the least time.



BETTER

SIZE	MIN./STD. PKG.	SPEC	PRODUCT NO.	UPC NO.
SQUARE ABRASIVE FILES				
3 X 1/4	5/10	SOFT ARKANSAS, EXTRA FINE HARD ARKANSAS, ULTRA FINE	SF13 HF13	61463690415 61463686590
3 X 3/8	5/10	SOFT ARKANSAS, EXTRA FINE HARD ARKANSAS, ULTRA FINE	SF33 HF33	61463690416 61463686595
3 X 1/2	5/10	SOFT ARKANSAS, EXTRA FINE HARD ARKANSAS, ULTRA FINE	SF43 HF43	61463690417 61463686600
4 X 1/4	5/20	CRYSTOLON, MEDIUM INDIA, COARSE INDIA, MEDIUM INDIA, FINE	MJF14 CF14 MF14 FF14	61463686025 61463686075 61463686070 61463686065
4 X 5/16	5/20	INDIA, FINE	F24	61463690673
4 X 3/8	5/20	INDIA, FINE CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	FF24 FJF34 CF34 MF34 FF34	61463690673 61463686030 61463686090 61463686085 61463686080
4 X 1/2	5/20	CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	MJF44 FJF44 CF44 MF44 FF44	61463686045 61463686040 61463686105 61463686100 61463686095
6 X 1/2	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF46 MF46 FF46	61463686120 61463686115 61463686110
6 X 5/8	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF56 MF56 FF56	61463686135 61463686130 61463686125
6 X 3/4	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF66 MF66 FF66	61463686150 61463686145 61463686140
6 X 1	5/20	CRYSTOLON, COARSE CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CJF76 MJF76 FJF76 CF76 MF76 FF76	61463625001 61463625039 61463625003 61463686165 61463686160 61463686155

TRIANGULAR ABRASIVE FILES

3 X 1/4	5/10	HARD ARKANSAS, ULTRA FINE	HF113	61463686620
3 X 3/8	5/10	HARD ARKANSAS, ULTRA FINE	HF133	61463686625
3 X 1/2	5/10	HARD ARKANSAS, ULTRA FINE	HF143	61463686630
4 X 1/4	5/20	CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	FJF114 CF114 MF114 FF114	61463686185 61463686240 61463686235 61463686230
4 X 3/8	5/20	CRYSTOLON, MEDIUM INDIA, COARSE INDIA, MEDIUM INDIA, FINE	MJF134 CF134 MF134 FF134	61463686200 61463686255 61463686250 61463686245
4 X 1/2	5/20	CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	FJF144 CF144 MF144 FF144	61463686205 61463686270 61463686265 61463686260
4 X 1/2 X 1/4	5/20	INDIA TAPERED, MEDIUM INDIA TAPERED, FINE	MF544 FF544	61463686685 61463686680
6 X 1/2	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF146 MF146 FF146	61463686285 61463686280 61463686275
6 X 5/8	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF156 MF156 FF156	61463686300 61463686295 61463686290
6 X 3/4	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF166 MF166 FF166	61463686315 61463686310 61463686305
6 X 1	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF176 MF176 FF176	61463686330 61463686325 61463686320

SHARPENING STONES

ABRASIVE FILES (CONTINUED)

ROUND ABRASIVE FILES

Round Files are ideal for deburring, chamfering, radiusing, lapping, honing, for cleaning radius tools to a burr free edge, and for dimensioning compound curves on templates.

The India line also offers Tapered Rounds.... selected by craftsmen, woodworkers, and die makers as the unique shape for imparting the correct edge quickly.



HALF ROUND FILES

Half Round Files offer both a round and a flat surface for imparting a fine finish on precision machine parts, tools and dies.



PRECISION FILES

POINTED ABRASIVE FILES

Pointed Files are ideally suited for engravers and die sinkers for stoning difficult recesses on instruments and die tools.



DIAMOND SHAPED ABRASIVE FILES

Diamond Files are precision sharpening favorites for cleaning acute angles in dies and molds and for stoning geometric chasers and sewing machine feeds.



BEVELED ABRASIVE FILE

Beveled Files are preferred by exacting artisans, jewelers, mechanics, and watchmakers for honing the finest of finishes. These extremely hard files provide years of service.



BETTER

SIZE	MIN./STD. PKG.	SPEC	PRODUCT NO.	UPC NO.
ROUND ABRASIVE FILES				
3 X 1/4	5/10	HARD ARKANSAS, ULTRA FINE	HF813	61463686800
4 X 1/4	5/20	CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	MJF214 FJF214 CF214 MF214 FF214	61463686430 61463686425 61463686480 61463686475 61463686470
4 X 3/8	5/20	CRYSTOLON, MEDIUM INDIA, COARSE INDIA, MEDIUM INDIA, FINE	MJF234 CF234 MF234 FF234	61463686440 61463686495 61463686490 61463686485
4 X 1/2	5/20	CRYSTOLON, MEDIUM INDIA, COARSE INDIA, MEDIUM INDIA, FINE	MJF244 CF244 MF244 FF244	61463686450 61463686510 61463686505 61463686500
4 X 1/2 X 1/4	5/20	INDIA TAPERED, COARSE INDIA TAPERED, MEDIUM INDIA TAPERED, FINE	CF644 MF644 FF644	61463686660 61463686655 61463686650
6 X 1/2	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF246 MF246 FF246	61463686525 61463686520 61463686515
6 X 5/8	5/20	INDIA, MEDIUM	MF256	61463686535
6 X 3/4	5/20	INDIA, MEDIUM	MF266	61463686550
6 X 1	5/20	INDIA, MEDIUM	MF276	61463686565
HALF ROUND ABRASIVE FILES				
4 X 1/4	5/20	INDIA, MEDIUM INDIA, FINE	MF314 FF314	61463686355 61463686350
4 X 5/16	5/20	INDIA, MEDIUM	MF324	61463686370
4 X 3/8	5/20	INDIA, MEDIUM INDIA, FINE	MF334 FF334	61463686385 61463686380
4 X 1/2	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF344 MF344 FF344	61463686405 61463686400 61463686395

BETTER

SIZE	MIN./STD. PKG.	SPEC	PRODUCT NO.	UPC NO.
POINTED ABRASIVE FILES				
3 X 1/4 BASE	5/10	HARD ARKANSAS, ULTRA FINE	HF863	61463686825
3 X 5/16 BASE	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF723 MF723 FF723	61463686750 61463686745 61463686740
DIAMOND SHAPED ABRASIVE FILES				
3 X 1/2 X 3/16	5/10	HARD ARKANSAS, ULTRA FINE	HF843	61463686815
4 X 9/16 X 3/16	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CT134 MT134 FT134	61463686720 61463686715 61463686710
BEVELED ABRASIVE FILE				
3 X 3/8 X 1/8	5/10	HARD ARKANSAS, ULTRA FINE FF214, FF724.	HF833	61463686810

SHARPENING STONES

PRECISION FILES (CONTINUED)

FLAT ABRASIVE FILE

The choice of mechanics, artisans and jewelers, these long lasting files produce the finest finishes.



OVAL ABRASIVE FILE

The Oval File's shape makes it ideal for finishing and honing recesses or curved edges of precision instruments.



KNIFE BLADE FILES

Knife Blade Files are used by clock and watch makers to quickly sharpen, hone and maintain the edge and point of cutting tools.



FILE ASSORTMENT KITS

Hard Arkansas File Kits

This kit provides a selection of the our most popular square, triangular, round and knife blade files in ultra fine Hard Arkansas for honing and polishing a wide range of configurations.



Hard Arkansas-India File Kits

This kit accommodates the complete range of finishing, honing and polishing applications. It contains a selection of the most popular file shapes/sizes in both fine grit India and ultra fine grit Hard Arkansas.



SILVERSMITH PRECISION FILES

These aluminum oxide precision-shaped stones are designed for use by silversmiths and mechanics for close tolerance lapping, touching-up instruments, and for cleaning tools and dies.



X



BB



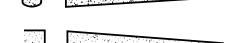
Y



DD



AA



EE

BETTER

SIZE	MIN./STD. PKG.	SPEC	PRODUCT NO.	UPC NO.
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FLAT ABRASIVE FILE

3 X 3/8 X 1/8	5/10	HARD ARKANSAS, ULTRA FINE	HF823	61463686805
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OVAL ABRASIVE FILE

3 X 1/2 X 3/16	5/10	HARD ARKANSAS, ULTRA FINE	HF853	61463686820
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KNIFE BLADE FILES

3 X 3/4 X 1/8	5/10	HARD ARKANSAS, ULTRA FINE	HF873	61463686830
4 X 1 X 1/8 BACK	5/20	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF724 MF724 FF724	61463686780 61463686775 61463686770

ABRASIVE FILE ASSORTMENT KITS

HARD ARKANSAS	1/5	INCLUDES 1 EACH OF HF13, HF113, HF813, HF873.	61463686839
HARD ARKANSAS – INDIA KIT	1/5	INCLUDES 1 EACH OF HARD ARKANSAS HF13, HF43, HF113, HF813, HF873, INDIA FF14, FF44, FF114, FF214, FF724.	61463686840

SILVERSMITH STONES

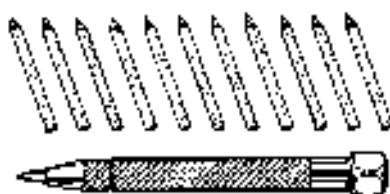
4 X 5/16 X 3/16 X 5/16 X 1/16	5/20	X	INDIA, MEDIUM INDIA, FINE	MF414 FF414	61463686855 61463686850
4 X 3/8 X 3/16 X 1/8 X 1/16	5/20	Y	INDIA, MEDIUM INDIA, FINE	MF424 FF424	61463686915 61463686910
4 X 7/16 X 3/16 X 1/8	5/20	AA	INDIA, FINE	FF434	61463686940
4 X 1/2 X 1/16	5/20	BB	INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CF444 MF444 FF444	61463686965 61463686960 61463686955
4 X 1/2 X 1/4 X 5/16 X 1/8	5/20	DD	INDIA, MEDIUM INDIA, FINE	MF464 FF464	61463686990 61463686985
4 X 1/2 X 1/4 X 5/16 X 1/8	5/20	EE	INDIA, MEDIUM INDIA, FINE	MF474 FF474	61463687005 61463687000

ENGRAVERS' CHUCK AND POINTS

ENGRAVERS' CHUCK ONLY	5/10	EP	ENGRAVER'S CHUCK	XT1	61463687485
1 X 1/8	5/20	EP	INDIA POINT, FINE SOFT ARKANSAS POINT, EXTRA FINE	FT11 AT11	61463687495 61463687490

ENGRAVERS' CHUCK & POINTS

Engravers' Points are the choice of professional die-makers for cleaning out tight corners and recesses of dies where close tolerances and accuracy are a must. The Engravers' Chuck is a knurled nickel-plated tool designed to hold the Engravers' Point.

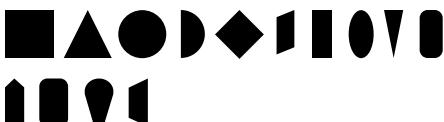


SHARPENING STONES

PRECISION FILES (CONTINUED)

STONE ROLL KIT

Thirty-five (35) stone items in a variety of abrasives, grits, shapes and sizes designed to provide a configuration suitable to satisfying every need. Housed in a durable vinyl roll that offers protection, easy portability, and full stone display, the stones are fastened by an elastic strap which permits easy removal and replacement of all items.



BETTER

SIZE	MIN./ STD. PKG.	SHAPE	SPEC	PRODUCT NO.	UPC NO.
STONE ROLL KIT					
STONE ROLL KIT	1/2		SEE BELOW	61463686841	

STONE ROLL KIT CONTENTS

TYPE	SIZE	DESCRIPTION	PRODUCT NO.
CRYSTOLON	4X1X 1/4	BENCHSTONE, COARSE	CJB14
	4X1-3/4X5/8	BENCHSTONE, COMBINATION	JB134
	4X3/8	TRIANGULAR FILE, MEDIUM	MJF134
	4X3/8	ROUND FILE, FINE	FJF234
INDIA	4X1-3/4X3/8	BENCHSTONE, COMBINATION	IB134
	4X 3/8	SQUARE FILE, COARSE	CF34
	4X1/2X1/4	TAPER TRIANGLE, MEDIUM	MF544
	4X1/4	ROUND FILE, FINE	FF214
	4X1/2X1/4	TAPER ROUND, MEDIUM	MF644
	4X3/8	HALF ROUND FILE, MEDIUM	MF334
	4X9/16X3/16	DIAMOND FILE, MEDIUM	MT134
	3X5/16 BASE	INDIA POINT, MEDIUM	MF723
	4X1X1/8 BACK	KNIFE BLADE, MEDIUM	MF724
	4X5/16X3/16X5/16X1/16	SILVERSMITH FILE, MEDIUM	MF414
	4X3/8X3/16X1/8X1/16	SILVERSMITH FILE, MEDIUM	MF424
	3-1/2X7/16X3/16	SILVERSMITH FILE, MEDIUM	MF433
	4X7/16X3/16X1/8	SILVERSMITH FILE, MEDIUM	MF434
	4X1/2X1/16	SILVERSMITH FILE, MEDIUM	MF444
	4X1/2X3/16X3/16X1/16	SILVERSMITH FILE, MEDIUM	MF454
	4X1/2X1/4X5/16X1/8	SILVERSMITH FILE, MEDIUM	MF464
	4X1/2X1/4X5/16X1/8	SILVERSMITH FILE, MEDIUM	MF474
	4X1X7/16X3/16	ROUND EDGE SLIP, FINE	FS14
SOFT ARKANSAS	3-1/2X3/4X3/16	REAMER STONE, MEDIUM	MT123
	4 LONG	AUGER BIT STONE, MEDIUM	MT10
	4X1X3/8	PENKNIFE BENCHSTONE, EXTRA FINE	SB14
	3X1/4	SQUARE FILE, ULTRA FINE	HF13
HARD ARKANSAS	3X1/4	TRIANGULAR FILE, ULTRA FINE	HF113
	3X1/4	ROUND FILE, ULTRA FINE	HF813
	3X1/2X3/16	DIAMOND FILE, ULTRA FINE	HF843
	3X3/8X1/8	BEVEL FILE, ULTRA FINE	HF833
	3X3/8X1/8	FLAT FILE, ULTRA FINE	HF823
	3X1/2XX3/16	oval FILE, ULTRA FINE	HF853
	3X1/4 BASE	POINTED FILE, ULTRA FINE	HF863
	3X3/4X1/8 BACK	KNIFE BLADE, ULTRA FINE	HF873
	4X1-3/4X3/8X1/8	ROUND EDGE SLIP, ULTRA FINE	HS4

ABRASIVE SLIPS

Norton abrasive slips impart the finest, most uniform finish on curved knives and tools, molders' knives, wood gouges, bead planers, carving tools and carbide-tipped tools. These fast-acting slips hold their shape and are long lasting.



SHARPENING STONES

ABRASIVE SLIPS

CARBIDE TOOL SLIPS

Crystolon (silicon carbide) Slips are used to maintain the edge of carbide tools, keeping regrinding costs and time to an absolute minimum. Not oil-filled. The set of three slips offers a complete sharpening service.



ROUND EDGE SLIPS

Round Edge Slips are ideal for precision sharpening and honing of bead planers, curved knives and tools, molders' knives, and wood gouges.



SIZE	MIN./ STD. PKG.	SHAPE	SPEC	BETTER	
				PRODUCT NO.	UPC NO.
CARBIDE TOOL SLIPS					
3-1/2 X 3/4 X 1/2	5/20		CRYSTOLON, MEDIUM CRYSTOLON, FINE	MJT63 FJT63	61463687290 61463687285
SET OF 3 SLIPS	5/10		CRYSTOLON (COARSE/MEDIUM/FINE)	J63	61463687300
ROUND EDGE SLIPS					
3 X 1-3/4 X 1/4 X 1/16	5/10		HARD ARKANSAS, ULTRA FINE	HS3	61463687040
4 X 1 X 7/16 X 3/16	5/10		INDIA, MEDIUM INDIA, FINE	MS14 FS14	61463687140 61463687135
4 X 1-1/4 X 1/4 X 1/8	5/10		HARD ARKANSAS, ULTRA FINE	HS14	61463687050
4 X 1-3/4 X 3/8 X 1/8	5/10		SOFT ARKANSAS, EXTRA FINE HARD ARKANSAS, ULTRA FINE	SS4 HS4	61463687055 61463687045
4-1/2 X 1-3/4 X 1/4 X 1/16	5/10		CRYSTOLON, COARSE CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CJS24 MJS24 FJS24 CS24 MS24 FS24	61463687085 61463687080 61463687075 61463687155 61463687150 61463687145
4-1/2 X 1-3/4 X 3/8 X 1/8	5/10		INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CS34 MS34 FS34	61463687170 61463687165 61463687160
4-1/2 X 1-3/4 X 1/2 X 3/16	5/10		CRYSTOLON, COARSE CRYSTOLON, MEDIUM CRYSTOLON, FINE INDIA, COARSE INDIA, MEDIUM INDIA, FINE	CJS44 MJS44 FJS44 CS44 MS44 FS44	61463687100 61463687095 61463687090 61463687185 61463687180 61463687175
5 X 1 X 5/16 X 3/32	5/10		INDIA, MEDIUM INDIA, FINE	MS15 FS15	61463687195 61463687190
6 X 2-1/4 X 3/4 X 3/8	5/10		CRYSTOLON, MEDIUM CRYSTOLON, FINE	MJS66 FJS66	61463687110 61463687105

SPECIALTY STONES FOR WOODWORKING

CARVING TOOL SLIPS

Carving Tool Slips are ideal for sharpening, final finishing and maintaining the edge required on the special gouges, knives and deep-grooved tools used in carving wood.



SIZE	MIN./ STD. PKG.	SHAPE	SPEC	BETTER	
				PRODUCT NO.	UPC NO.
CARVING TOOL SLIPS					
2-1/4 X 7/8 X 3/16	5/20	Q	INDIA, MEDIUM	MS22	61463687220
		S	INDIA, MEDIUM	MS42	61463687230
		Q	HARD ARKANSAS, ULTRA FINE AS22	61463687255	
		S	HARD ARKANSAS, ULTRA FINE AS42	61463687265	

GOUGE SHARPENING STONE

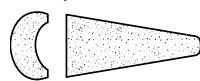
6 X 2 X 1 X 1/2 X 3/8	5/10	U	INDIA GOUGE SHARPENING STONE, FINE	FS76	61463687305
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JOINTER STONES

4 X 3/4 X 1/4	5/10		CRYSTOLON, MEDIUM INDIA, COARSE	JE54 IE54	61463687325 61463687365
4 X 3/4 X 5/16	5/10		CRYSTOLON, MEDIUM INDIA, COARSE	JE64 IE64	61463687330 61463687370
4 X 3/4 X 3/8	5/10		CRYSTOLON, MEDIUM INDIA, COARSE	JE74 IE74	61463687335 61463687374
4 X 3/4 X 1/2	5/10		CRYSTOLON, MEDIUM INDIA, COARSE	JE84 IE84	61463687340 61463687380
4 X 3/4 X 3/4	5/10		CRYSTOLON, MEDIUM INDIA, COARSE	JE104 IE104	61463687345 61463687385

GOUGE SHARPENING STONE

Aluminum oxide Gouge Sharpening Stones have a unique shape for sharpening and lapping inside and outside curved surfaces on gouges and other cutting tools. An indispensable tool for woodworkers, mechanics, artisans and craftsmen.



JOINTER STONES

Jointer Stones provide a fast method of restoring and maintaining the cutting edges of mechanical jointing devices on automatic planers.



SHARPENING STONES

MACHINE TOOL SPECIALTY STONES

MACHINE KNIFE STONES

Silicon carbide Machine Knife Stones offer both a coarse and a fine side for sharpening and honing paper- and cloth-cutting knives and planer knives on the machine. The groove around the middle of the stone protects fingers and provides a secure hold.



REAMER STONES

Aluminum oxide Reamer Stones are durable, fast-cutting stones designed for imparting a professional edge on reamers, taps and rough rounders on shoe machine tools.



BOAT STONES

Boat Stones are medium grit, medium grade stones that are easy to hold and use. Excellent for deburring and breaking sharp edges on dies, fixtures and machined parts, and for deburring grinder magnetic chucks.

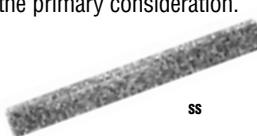


SIZE	MIN./ STD. PKG.	SHAPE	SPEC	BETTER	
				PRODUCT NO.	UPC NO.
MACHINE KNIFE STONE					
4" DIA. X 1 1/2 THICK	1/5	MK	CRYSTOLON MACHINE KNIFE STONE, COARSE/FINE	JB74	61463687570
REAMER STONES					
4-1/2 X 1 X 5/16	5/10		INDIA, MEDIUM INDIA, FINE	MT124 FT124	61463687420 61463687415
5 X 1 X 3/16	5/10		INDIA, MEDIUM INDIA, FINE	MT125 FT125	61463687430 61463687425
6 X 1 X 1/4	5/10		INDIA, MEDIUM INDIA, FINE	MT126 FT126	61463687440 61463687435
BOAT STONES					
1-1/2 X 2-1/2 X 9 (ME42620)	10/50		38A609-IVBE		61463610503
1-1/2 X 2-1/2 X 9 (ME42620)	10/50		37C80-HV		61463610369

SPECIALTY LARGE ABRASIVE FILES

SICKLE & SCYTHESTONE

The silicon carbide Sickle & Scythesone quickly produces a fast-cutting edge on sickles, scythes and brush hooks. This stone is most frequently chosen where the speed of sharpening is the primary consideration.



TRADESMEN'S UTILITY STONES

These silicon carbide stones can be used to quickly sharpen trimming knives used on leather and rubber, and as abrasive files in many industries. The JT910 is a single grit stone without handle. The JT920 offers the same stone with a sturdy wooden handle. The JT930 also has a wooden handle, but features a stone with two different grit surfaces.



TS

GARDEN TOOL SHARPENER

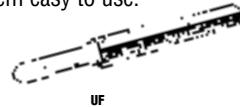
The silicon carbide Garden Tool Sharpener, used by gardeners and homeowners, has numerous industrial uses. The elliptical shape makes the stone conformable to all flat and curved cutting edges.



GT

UTILITY FILE

Silicon carbide utility files have a long, wedge shape and four flat sides designed for sharpening coarse edges on cutting implements and edged garden tools. Fast and efficient, they outlast and out-sharpen metal files. The wooden handle makes them easy to use.



UF

SICKLE & SCYTHESTONES

10 X 1-5/16 X 3/4	5/10		ALUNDUM SCYTHESTONE, COARSE	TD1	61463687715
10 X 1-1/4 X 3/4	5/10	SS	CRYSTOLON SICKLE & SCYTHESTONE, COARSE	TJ3	61463687731

TRADESMEN'S UTILITY STONES

10 X 1-1/4 X 3/4	5/10	TS	CRYSTOLON TRADESMEN'S STONE, MEDIUM	JT910	61463687665
14-3/4 OVERALL	5/10	TS	CRYSTOLON TRADESMEN'S STONE, COARSE/FINE CRYSTOLON TRADESMEN'S STONE, MEDIUM	JT930 JT920	61463687675 61463687670

GARDEN TOOL SHARPENER

9-1/2 X 1-3/8 X 1/2	5/10	GT	CRYSTOLON GARDEN TOOL SHARPENER, MEDIUM	JT911	61463687746
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UTILITY FILE

14 OVERALL	5/10	UF	CRYSTOLON UTILITY FILE, COARSE	JD2	61463687750
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SHARPENING STONES

RETAIL AND GIFT PACKS

BETTER						
*	SIZE	STD. PKG.	SHAPE	SPEC	PRODUCT NO.	UPC NO.
RETAIL AND GIFT PACKS						
G	3" DIA. X 5/8" THICK	50		SILICON CARBIDE AXE & HATCHET SHARPENER (BULK)	JT3	61463690706
G	3" LONG	50	FS	S/C FISHERMAN'S FISH HOOK STONE W/ POUCH (BULK)		61463624072
G	3 X 7/8 X 3/8	50	I	CRYSTOLON POCKET STONE W/ CASE (BULK)	JP14	61463690703
R	3 X 1-1/2 X 1/2	10	I	SPORTMEN'S SHARPENING STONE W/ CASE (CARDED)	IBP34	07660787630
G		50		SPORTMEN'S SHARPENING STONE (BULK)	IBP34	61463690705
R	4 X 3/4 X 1/4	25	I	A/O EMBOSSED SOUVENIR STONE WITH POUCH	IPB4	61463624153
G	6 X 2 X 3/4	50	I	COMBINATION TOOL AND KNIFE SHARPENER (BULK)	AE6	61463690693
G		50	I	ECONOMY COMBINATION BENCHSTONE (BULK)	UPB6	61463690694
R	6 X 2 X 3/4	10		ECONOMY TOOL AND KNIFE SHARPENER (CARDED)	UPB6	07660787933
R	8 X 2 X 3/4	10	I	ECONOMY TOOL AND KNIFE SHARPENER (CARDED)	UPB8	07660787934
R	6-1/2 X 1-3/4 X 3/4	10	I	YANKEE CLIPPER BENCHSTONE (BOX)	APB6	61463685805
G	7-1/2 OVERALL	50	KK	SILICON CARBIDE KITCHEN KNIFE SHARPENER (BULK)	273A	61463690708
R	8 X 2 X 1	10	I	QUICKCUT COMBINATION BENCHSTONE, (CARDED)	UPB8	61463685755
G		50		QUICKCUT COMBINATION BENCHSTONE (BULK)	UPB8	61463690695

*R = RETAIL, G = GIFT PACK

RUBBING BRICKS

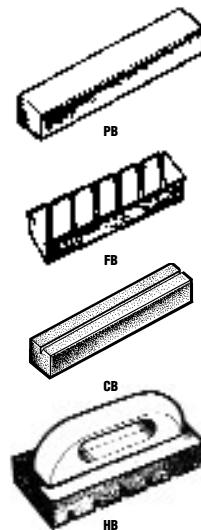
HAND RUBBING BRICKS

Hand Rubbing Bricks, manufactured with extra coarse silicon carbide abrasive, are available in three types...plain, fluted and fluted with handle.

Plain Bricks are the choice of mechanics and foundrymen for dressing grinding wheels and cleaning or scouring castings.

Fluted Bricks are used by masons and stone workers for rubbing down concrete and removing mold marks. The diagonal flutes provide sharp edges, a clean shearing action, and carry away debris.

Fluted Bricks with Handle make quick work of removing mold marks and rubbing down concrete. The firmly attached handle reduces fatigue and facilitates overhead, wall and floor work.



FLOOR RUBBING BRICKS

Silicon carbide Floor Rubbing Bricks are designed to fit the chuck of common concrete floor grinding equipment used for rubbing down concrete and removing mold marks.

BETTER					
SIZE L X W X H	MIN./ STD. PKG.	SHAPE	SPEC	PRODUCT NO.	UPC NO.
RUBBING BRICKS					
6 X 2 X 2	1/5	PB FB	CRYSTOLON PLAIN HAND RUBBING BRICK CRYSTOLON FLUTED HAND RUBBING BRICK	BP26 BF26	61463687820 61463687840
6 X 3 X 1	1/5	HB	FLUTED HAND RUBBING BRICK W/ HANDLE	BFH6	61463687800
8 X 2 X 2	1/5	PB FB CB	CRYSTOLON PLAIN HAND RUBBING BRICK CRYSTOLON FLUTED HAND RUBBING BRICK CRYSTOLON FLOOR WITH CENTER SCORE CRYSTOLON FLOOR WITH CENTER SCORE CRYSTOLON FLOOR WITH CENTER SCORE	BP28 BF28 C10R C80R C120R	61463687830 61463687845 61463685254 61463685256 61463685296
8 X 3-1/2 X 1-1/2	1/5	HB	FLUTED HAND RUBBING BRICK W/ HANDLE	235	61463687795
PACKAGE OF 6	6/6		WOODEN WEDGES FOR FLOOR GRINDING MACHINE		61463685297