

Reshaping
your
world

Premium Industrial Abrasive Solutions



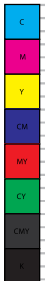
GRINDING WHEELS

DRESSERS

DIAMOND WHEELS

CBN WHEELS

SANDING BELTS-DISCS-SHEETS



NORTON
SAINT-GOBAIN®





BONDED ABRASIVES



BENCH AND PEDESTAL WHEELS



VITRIFIED WHEELS



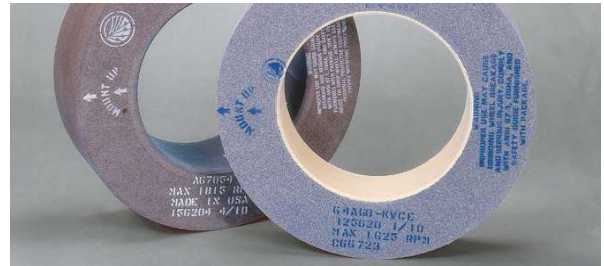
ROLL GRINDING WHEELS



CYLINDRICAL WHEELS



SPRING GRINDING WHEELS



CENTERLESS AND FEED WHEELS



TOOL GRINDING CUP WHEELS



CREEPFEED WHEELS



ID GRINDING WHEELS



GEAR WHEELS





BONDED ABRASIVES



SURFACE GRINDING SEGMENTS



High Porosity Wheels for Heat-Sensitive Applications



MOUNTED POINTS



SHARPENING STONES AND DRESSING STICKS




**REVOLUTIONARY BOND TECHNOLOGY
RESHAPING THE WORLD OF PRECISION GRINDING**

DIAMOND & CBN PRODUCTS



High Performance Flute Grinding Wheel



Polishing Flute Wheel



Thread Grinding Wheel



Insert Carbide, Ceramic Grinding Wheel





DIAMOND & CBN PRODUCTS



Resin Bond Wheel for Grinding Cutting Tool



Resin Bond Wheel for Grinding Wood Cutter



Vitrified CBN Wheel



Internal Diameter (ID) Grinding Wheel



Honing Stick



Rotary Diamond Dresser



TOP and Bottom Grinding Wheels



Electroplated Tools



Multi Point Diamond Dresser



Single Point Diamond Dresser





COATED ABRASIVES



Paper backing sheet and roll



Cloth backing sheet and roll



Microfinishing Film Rolls



File, Narrow and Wide Belts



Flap Disc



Fiber Disc



Diamond Products (Disc and Belt)



No-Woven Products (Belt, Pad and Quick-Change Disc)



PSA and Velcro Discs



Norax Belt




PRODUCT IDENTIFICATION

COATED ABRASIVES

R 9 8 0 P

BACKING/ BOND	PRINCIPAL ABRASIVE	COATING	RANDOM	MODIFIER
A = Lightweight Paper (A-D wts.) excluding Waterproof	1 = AluminumOxide	1 = Openkote	Designates different products within the same product group.	Additional description, often indicative of a product upgrade, i.e. "P" = Plus
F = Fiber	2 = AluminumOxide	2 = Closekote		
H = Heavy Paper /Resin Bond (E and F wts.)	3 = Layered AluminumOxide	3 = Openkote		
K = Cloth / GlueBond (J and X wts.)	4 = Silicon Carbide	4 = Closekote		
PB = B-wt. Paper withResin Bond and Latex	5 = Garnet	5 = Openkote		
Q = Various (e.g. Screen-Bak, Film, and Foam)	6 = Crocus & Emery	6 = Closekote		
R = Cloth /Resin Bond (H, J, X and Y wts.)	8 = Zirconia Alumina	7 = Openkote		
T = Waterproof Paper (A, C wts.)	9 = NortonSG Ceramic Alumina	8 = Closekote		
U = Lightweight Waterproof Paper/ N ORaX Engineered Abrasive Resin Bond		9 = Openkote		
		0 = Closekote		




BONDED ABRASIVES

Conventional Grinding Wheels

32A 46 I 8 V BE

ABRASIVE				GRIT SIZE			GRADE			STRUCTURE	BONDTYPE	NORTONSYMBOL
ALUMINUM OXIDE	CERAMIC ALUMINUM OXIDE	SILICON CARBIDE	ZIRCONIA ALUMINA	COARSE 12	MEDIUM 30	FINE 80	SOFT D	MEDIUM I	HARD Q	RELATIVE GRAIN	Resin = B Shellac = E	Designates a variation or modification to bond.
23A	OXIDE	37C	4NZ	14	36	90	E	J	R	SPACING	Plastic = P	
25A	3SGP	39C	4ZF	16	46	100	F	K	S	DENSE	Rubber = R	
32A	3SGR	Crystolon	5ZF	20	54	120	G	L	T		Vitrified = V	
32AC (blend)	5SG	Masonry	AZ (blend)	24	60	150	H	M	U			
38A	BRG		BlueFire		70	220		N	V			
48A	SG		Charger					O	Y			
53A	SXG		(blend)					P	Z			
55A	NorZon Plus		NZ									
57A	(blend)		NZC (blend)									
U57A	NQ Quantum		NZIII									
64A	Targa		NZIV							OPEN		
86A			NorZon									
90A			ZI									
Alundum												
FabCut												
India												
Gemini												
Metal												
Vortex												



VITRIUM

PRODUCT IDENTIFICATION

DIAMOND PRODUCTS

ASD 120 – R 75 B99 1/8

ABRASIVE TYPE

- ASD**
- Used with B99 and B105 bonds
 - Armored
 - Durable
 - Versatile
 - Use wet or dry
 - Carbide/steel operations
- CD**
- Used with B99 bond
- D**
- Used with B99 bond
 - Micron-sized diamond finishing
- M3D**
- Used with M99 bond
- M4D**
- Used with M99 bond
 - Armored
 - Durable; for non-metallics
- RMD**
- Used with V99 bond
- SD**
- Used with B99 and V99 bonds
 - Norton standard
 - Use wet or dry
 - Free cutting
 - Low horsepower (3/4 hp or less)

GRIT SIZE

- 100S – Roughing
- 120 – Roughing/cutting-off
- 150 – Combined roughing and finishing
- 180 – Improving finish
- 220, 320 & 400 – Finishing only
- 10/20 mic
- 6/12 mic

GRADE

- Resin Bond**
- R – Norton standard
 - N – Free cutting
- Metal Bond**
- N – Norton standard
- Vitrified Bond**
- P – Norton standard
 - R – Most durable

CONCENTRATION

- 50**
- Most economical
 - For broad area of contact
- 75**
- Norton standard
 - Freer cutting than 100
 - Dry grinding with AD
- 100**
- Very durable
 - For flood coolants
 - Use with 220 grit or finer
 - Use for cutting-off
- 115**
- For CNC grinding machines
- 125**
- Form holding
 - For high volume, high pressure coolant, precision applications on high-speed tool steels

BOND

- B99**
- Resin bond
 - Use wet or dry
 - Tool making; resharpening
- B105**
- Premium resin bond
 - Advanced heat-reducing bond
 - Use dry; reconditioning
- B610 and B80**
- For CNC grinding machines
- M99**
- Metal bond
 - 1A1R cut-off
 - Glass and ceramics
- MSL**
- Metal single layer
 - Type 6A2 only
 - Use dry
 - Offhand reconditioning/finishing carbide
- V99**
- Vitrified bond
 - Offhand finishing of carbide tools
 - Plunge grinding

ABRASIVE DEPTH

- 1/16"
- 1/8"
- 1/4"
- 9/32"
- 3/8"
- 1/2"
- 3/4"
- solid



CBN PRODUCTS

CB 120 – T B99 1/8

ABRASIVE TYPE

- CB – cubic Boron Nitride**
- Used with B99 bond
 - Armored
 - Use wet or dry

GRIT SIZE

- 100 – Roughing
- 120 – Roughing/cutting-off
- 150 – Combined roughing and finishing
- 180 – Improving finish
- 220, 320, 400 – For finishing only

GRADE

- Q**
- Approx. 50 concentration
 - Type 6A2
 - Broad area of contact
- T**
- Approx. 75 concentration
 - Norton standard
 - First choice
 - Lower horsepower
 - Broad area of contact
 - Dry grinding
 - Resharpening applications
- W**
- Approx. 100 concentration
 - Most durable
 - High volume coolant
 - Flute polishing
 - Surface grinding
 - Cylindrical grinding

BOND

- B99**
- Resin bond
 - se wet or dry
- Aztec III**
- Premium resin bond
 - Use dry
 - Tool resharpening
- Aztec .007**
- Premium resin bond
 - Use dry
 - Increased feed rates
 - Heavy stock removal
 - Heavier cuts

ABRASIVE DEPTH

- 1/16"
- 1/8"
- 1/4"
- 1/2"
- Solid