

## FEATURED PRODUCTS



UPGRADED PERFORMANCE

### NORTON QUANTUM (5NQ)

BEST CHOICE FOR VERSATILITY, MAXIMUM PERFORMANCE AND COST SAVINGS

#### FEATURES

- Revolutionary, engineered ceramic grain shape and chemistry with proven bond technology – green
- NEW! Coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond

#### BENEFITS

- Versatile; for all low, medium and high force applications ranging from cast iron, to stainless steel and hard-to-grind Inconel and titanium
- Perform well on old and new machines
- 33% to 100% longer life vs. competitive ceramic products
- 30%+ higher metal removal rate
- 15%+ lower threshold power
- Lowest total grinding costs
- Highest productivity; lowest cycle and process time; most accurate finished parts



UPGRADED PERFORMANCE

### NORTON SG

BEST CHOICE FOR HIGH PRODUCTIVITY, LOW TOTAL PER-PART GRINDING COST

#### FEATURES

- High-performance seeded gel ceramic aluminum oxide abrasive
- Self-sharpening abrasive
- High performance VS and VSP bonds
- NEW! coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond
- Provide sharp edge on tools and dies
- 5SG – durable Norton SG and aluminum oxide blend – blue
- NORPOR 3SGR – Norton SG and 48A abrasive blend with VP2 porous bond – purple

#### BENEFITS

- Fast stock removal, cool, superior cutting
- 3X - 5X more life than aluminum oxide wheels
- Double rough stock removal rate versus conventional abrasives
- Less burn, less dressing; very consistent performing wheel
- Versatile; exceptional form holding
- Highest productivity; lowest cycle and process time; most accurate finished parts
- Longer life of tools and dies in production
- High stock removal rates, excellent productivity, long wheel life, low overall grinding cost
- Maximum productivity in heat-sensitive, heavy stock removal operations



### NORTON 32A

BETTER CHOICE FOR MEDIUM TO HEAVY STOCK REMOVAL

#### FEATURES

- Sharp monocrystalline aluminum oxide grain – the industry's most versatile abrasive – purple

#### BENEFITS

- Free cutting on a wide range of applications and materials
- Outstanding form holding



### NORTON 38A

GOOD CHOICE FOR LIGHT GRINDING OF TOOL STEELS

#### FEATURES

- White, friable abrasive grain
- Consistent quality
- NORPOR 38A – most friable, aluminum oxide abrasive with VP2 porous bond – white
- Versatile

#### BENEFITS

- Cool and burn-free cutting; ideal for heat-sensitive applications with light to moderate feed rates
- Excellent balance and dimensional accuracy time after time
- Exceptionally cool cutting in light pressure grinding applications, or heat-sensitive applications
- Ideal for use across a broad variety of tool steels



### NORTON GEMINI ALUMINUM OXIDE

GOOD CHOICE FOR USE ON GENERAL PURPOSE APPLICATIONS; ECONOMICAL

#### FEATURES

- Durable aluminum oxide abrasive and strong vitrified bond – Blue
- Versatile, economical

#### BENEFITS

- Consistent stock removing performance on narrow to medium contact areas; cool cutting
- Ideal when numerous small jobs are run on one machine
- The choice when initial price is the main purchasing criterion

Vitrified Wheels For Steel Applications CONTINUED

AVAILABILITY



TIER:  
BRAND:  
TRADENAME:  
ABRASIVE:

**BEST**  
Norton  
**QUANTUM / NORTON SG**  
Ceramic Alumina

**BETTER**  
Norton  
**32A**  
Aluminum Oxide

**GOOD**  
Norton  
**38A / 57A**  
Aluminum Oxide

SIZE (D x T x H)	MAX. RPM	MIN./STD. PKG.	SPEC.	PART #	SPEC.	PART #	MIN./STD. PKG.	SPEC.	PART #
<b>Type O1 Straight</b>									
14 x 1/2 x 5	1,800	1/-	5SG80-KVS	66253363814	32A60-KVBE	66253363761			
14 x 3/4 x 5	1,800	1/-			32A60-KVBE	66253363772			
14 x 1 x 3	1,800	1/-	5SG46-IVS	66253363960	32A46-HVBE	66253363912			
	1,800	1/-	5SG46-KVS	66253363961	32A46-IVBE	66253363914			
14 x 1 x 5	1,800	1/-			32A60-IVBE	66253363927			
	1,800	1/-	5SG46-GVSP	66253364108	32A46-GVBEP	66253364074	1/-	38A46-HVBE	66253364043
	1,800	1/-	5SG46-HVSP	66253313990	32A46-HVBE	66253363913	1/-	38A60-IVBE	66253363947
	1,800	1/-	5SG46-IVS	66253363970	32A46-IVBE	66253363915	1/-	38A60-JVBE	66253364051
	1,800	1/-	5SG46-JVS	66253363971	32A46-JVBE	66253363919	1/-	38A60-KVBE	66253364053
	1,800	1/-	5SG60-IVS	66253363974	32A46-KVBE	66253363921	1/-	38A80-KVBE	66253364058
	1,800	1/-	5SG60-IVSP	66253363871	32A60-GVBEP	66253364077	1/-	57A60-KVBE	66253364065
	1,800	1/-	5SG60-JVS	66253363975	32A60-HVBE	66253363926	1/-	57A60-LVBE	66253364066
	1,800	1/-	5SG60-KVS	66253363976	32A60-JVBE	66253363930	1/-	57A80-MVBE	66253364070
	1,800	1/-	5SG80-JVS	66253363979	32A60-KVBE	66253363932			
	1,800	1/-	5SG80-KVS	66253364003	32A60-LVBE	66253364035			
	1,800	1/-			32A80-JVBE	66253364038			
	1,800	1/-			32A80-KVBE	66253364039			
14 x 1 x 8	1,800	1/-			32A60-IVBE	66253363887			
14 x 1-1/2 x 5	1,800	1/-	5NQ46-HVS3	66253387216	32A46-GVBEP	66253364238	1/-	38A46-HVBE	66253313968
	1,800	1/-	5NQ46-IVS3	66253387219	32A46-HVBE	66253364335 B	1/-	38A46-HVBEP	66253313969
	1,800	1/-	5NQ46-IVS	69083159119	32A46-HVBEP	66253364243	1/-	38A46-IVBE	66253364090
	1,800	1/-	5NQ46-JVS	69083159120	32A46-IVBE	66253364336	1/-	38A46-JVBE	66253364240
	1,800	1/-	5NQ60-GVSP	69083159122	32A46-JVBE	66253364337	1/-	38A60-IVBE	66253364247
	1,800	1/-	5NQ60-JVS	69083159124	32A46-KVBE	66253364339			
	1,800	1/-	3SGP46-GVSP	66253306780	32A60-HVBE	66253364340			
	1,800	1/-	3SGP46-HVSP	66253307025	32A60-IVBE	66253364239			
	1,800	1/-	3SGP46-JVH	66253313976	32A60-JVBE	66253364341			
	1,800	1/-	5SG46-GVSP	66253364320	32A60-KVBE	66253364342			
	1,800	1/-	5SG46-HVS3	66253387231	32A80-JVBE	66253364246			
	1,800	1/-	5SG46-HVSP	66253302625					
	1,800	1/-	5SG46-IVS	66253364097					
	1,800	1/-	5SG46-IVS3	66253387234					
	1,800	1/-	5SG46-IVSP	66253302498					
	1,800	1/-	5SG46-JVS	66253364098 B					
	1,800	1/-	5SG60-IVS	66253364100					
	1,800	1/-	5SG60-JVS	66253364101					
	1,800	1/-	5SG60-KVS	66253302160					
	1,800	1/-	5SG80-KVS	66253363815					
14 x 2 x 5	1,800	1/-	5SG60-JVS	66253364414	32A46-IVBE	66253364323			
	1,800	1/-			32A46-JVBE	66253364508			
	1,800	1/-			32A46-KVBE	66253364509			
	1,800	1/-			32A60-KVBE	66253364510			

B = BEST SELLER; PERFORMS WELL IN A VARIETY OF APPLICATIONS FOR MANY SATISFIED CUSTOMERS

DRESSING: SINGLE POINT DRESSING TOOL STARTING RECOMMENDATIONS

WHEEL SIZES	TOOL SHANK DIAMETER	CERAMIC (NQ, NORTON SG, TG, ETC.), 37C & 39C WHEELS		25A, 32A, 38A, 48A, 53A, 57A, 64A, 86A WHEELS	
		PRODUCT NO.	PART #	PRODUCT NO.	PART #
12" to 14"	3/8"	BCSG5M6	66260157009	BC5M6	66260195004
	7/16"	BCSG5M7	66260156907	BC5M7	66260195005

THESE TOOLS ARE A STANDARD RECOMMENDATION; SEE THE "DIAMOND TOOL" SECTION FOR ADDITIONAL TOOLS. SEE THE FLIENEN TOOL SECTION FOR FURIOSO TOOLS, ENGINEERED SPECIFICALLY FOR QUANTUM VITRIFIED WHEEL DRESSING.

## How to Read an Abrasive Product Specification

Conventional Grinding Wheels																	
32A			46			I			8			V			BE		
ABRASIVE			GRIT SIZE			GRADE			STRUCTURE			BOND TYPE			NORTON SYMBOL		
ALUMINUM OXIDE	CERAMIC ALUMINUM OXIDE	SILICON CARBIDE	ZIRCONIA ALUMINA	COARSE	MEDIUM	FINE	SOFT	MEDIUM	HARD	RELATIVE GRAIN SPACING	Resin = B Shellac = E Plastic = P Rubber = R Vitrified = V	Designates a variation or modification to bond.					
23A	3SGP	37C	4NZ	12	30	80	D	I	Q	2							
25A	3SGR	39C	4ZF	16	46	100	F	K	S	4							
32A	3SGR	Crystolon	5ZF	20	54	120	G	L	T	5							
32AC (blend)	5SG	Masonry	AZ (blend)	24	60	150	H	M	U	6							
38A	BRG		BlueFire		70	220		N	V	8							
48A	SG		Charger					O	Y	12							
53A	SXG		(blend)					P	Z	16							
55A	NorZon Plus		NZ							19							
57A	(blend)		NZC (blend)							25							
U57A	NQ Quantum		NZIII							28							
64A	Targa		NZIV														
86A			NorZon														
90A			ZI														
Alundum																	
FabCut																	
India																	
Gemini																	
Metal																	
Vortex																	

## Shelf Life and Proper Storage of Grinding Wheels

It has always been Saint-Gobain Abrasives recommendation that resinoid bonded grinding wheels be used within 2 years from the date of manufacture. This recommendation assumes that resinoid bonded grinding wheels have been stored under ideal storage conditions. It might be true that under ideal storage conditions resinoid bonded grinding wheels can survive without any degradation in strength for well over two years. However, it is always wise to suspect any wheels over two years old and have them reinspected or re-speed tested to determine if there has been any degradation in strength. If the wheels are stored under less than ideal conditions, they might have a much shorter shelf life depending upon the severity of storage conditions. These same comments also apply to rubber and shellac bonded grinding wheels.

As for vitrified grinding wheels, the shelf life is less influenced by humidity and adverse storage conditions as compared to resinoid, rubber or shellac, but even vitrified grinding wheels do not have an infinite shelf life. The best procedure and the best rule of thumb is to have any wheel that is two years old or older re-speed tested and reinspected to ensure it is fit for use. The procedure for having this done and the charges will be explained by our Customer Service Department, but the cost of shipping as well as the cost of re-inspection is the customer's responsibility. Also, any wheels rejected or otherwise lost in the re-inspection process will also be the responsibility of the customer.

Keep in mind, however, that this procedure is good to verify the reliability of a product but must not be performed until you are ready to consume the wheel. If wheels are sent back after the two year time frame for re-inspection and re-testing and then put back on the shelf, there is no telling how long they will be fit for use after that last inspection. Therefore, these wheels must be consumed as soon as is practical.

