# FEATURED PRODUCTS



## **NORTON QUANTUM (5NQ)**

BEST CHOICE FOR VERSATILITY, MAXIMUM PERFORMANCE AND COST SAVINGS

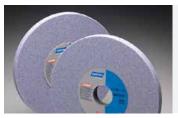
FEATURES	BENEFITS
Revolutionary, engineered ceramic grain shape and chemistry with proven bond technology – green	<ul> <li>Versatile; for all low, medium and high force applications ranging from cast iron, to stainless steel and hard-to-grind Inconel and titanium</li> <li>Perform well on old and new machines</li> <li>33% to 100% longer life vs. competitive ceramic products</li> <li>30%+ higher metal removal rate</li> <li>15%+ lower threshold power</li> <li>Lowest total grinding costs</li> </ul>
■ NEW! Coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond	Highest productivity; lowest cycle and process time; most accurate finished parts



#### **NORTON SG**

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

FEATURES	BENEFITS			
High-performance seeded gel ceramic aluminum oxide abrasive	<ul> <li>Fast stock removal, cool, superior cutting</li> <li>3X - 5X more life than aluminum oxide wheels</li> <li>Double rough stock removal rate versus conventional abrasives</li> </ul>			
Self-sharpening abrasive	Less burn, less dressing; very consistent performing wheel			
■ High performance VS and VSP bonds	■ Versatile; exceptional form holding			
NEW! coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond	Highest productivity; lowest cycle and process time; most accurate finished parts			
Provide sharp edge on tools and dies	Longer life of tools and dies in production			
5SG – durable Norton SG and aluminum oxide blend – blue	High stock removal rates, excellent productivity, long wheel life, low overall grinding cost			
<ul> <li>NORPOR 3SGR – Norton SG and 48A abrasive blend with VP2 porous bond – purple</li> </ul>	Maximum productivity in heat-sensitive, heavy stock removal operations			



#### **NORTON 32A**

BETTER CHOICE FOR MEDIUM TO HEAVY STOCK REMOVAL

FEATURES	BENEFITS
<ul> <li>Sharp monocrystalline aluminum oxide grain – the industry's most versatile abrasive – purple</li> </ul>	<ul><li>Free cutting on a wide range of applications and materials</li><li>Outstanding form holding</li></ul>



#### **NORTON 38A**

GOOD CHOICE FOR LIGHT GRINDING OF TOOL STEELS.

FEATURES	BENEFITS				
■ White, friable abrasive grain	Cool and burn-free cutting; ideal for heat-sensitive applications with light to moderate feed rates				
■ Consistent quality	■ Excellent balance and dimensional accuracy time after time				
■ NORPOR 38A – most friable, aluminum oxide abrasive with VP2 porous bond – white	Exceptionally cool cutting in light pressure grinding applications, or heat-sensitive applications				
■ Versatile	■ Ideal for use across a broad variety of tool steels				



#### **NORTON GEMINI ALUMINUM OXIDE**

GOOD CHOICE FOR USE ON GENERAL PURPOSE APPLICATIONS; ECONOMICAL

FEATURES	BENEFITS		
<ul><li>Durable aluminum oxide abrasive and strong vitrified bond – Blue</li></ul>	<ul> <li>Consistent stock removing performance on narrow to medium contact areas; cool cutting</li> </ul>		
■ Versatile, economical	<ul><li>Ideal when numerous small jobs are run on one machine</li><li>The choice when initial price is the main purchasing criterion</li></ul>		

#### **ID** and Race Wheels



For more program details, ask your Norton sales representative to review the First Line VFL ID & Race Wheel Brochure #6981 with you.

## ID and Race Wheel FastTrack Availability

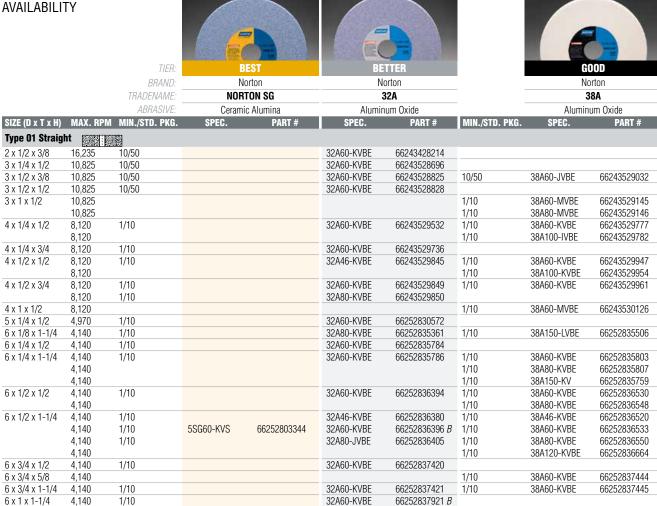
Type 01 Straig	ght 💮 💮			
Diameter	r: 0.164" thru 4.532"	Thicknes		
Type 05 Rece	ssed One Side			
Diameter	r: 0.407" thru 4.625"	Thickne	ss: 3/16" thru 3.100"	
ABRASIVE	25A, 32A, 38A, 48A, 53A, 57A	5TG**	Quantum (NQ) 1SG, 3SG, 5SG	32AA
GRIT	46* - 120	80/1, 120/1	36 - 150	46 - 80
GRADE	J - P	I - M	I - N	I - M
STRUCTURE	6	8	6	6
BOND	VFL	VFL	VFL	VFL
SPEED	8,500 SFPM***			
TREAT 22	Available for Quantu	m (NQ) 32A, and 53A		

\* 46 GRIT ONLY AVAILABLE IN .312 DIAMETER \*\* 5TG IS AVAILABLE IN /1 COMBINATION ONLY

Vitrified First Line (VFL) ID and Race Wheel availability encompasses over 1,000 wheel sizes and most abrasive types. These high-performance wheels are made-to-order and shipped within two weeks of receipt of your order.

Additional dimensions and grinding faces are available as made-to-order products with 4-week lead-times.

## **Vitrified Wheels For Steel Applications**



<sup>\*\*\*</sup> SPEEDS UP TO 12,500 SFPM BY REQUEST AND SAFETY APPROVAL

# **Vitrified Wheels For Steel Applications CONTINUED**

# AVAILABILITY





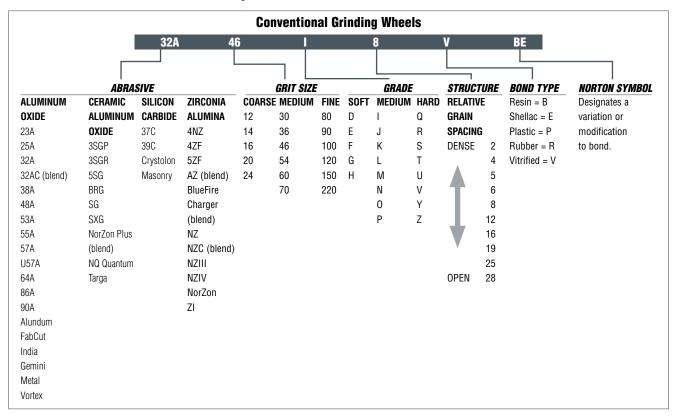


IIER:	BEST	BETTER
BRAND:	Norton	Norton
TRADENAME:	NORTON SG	32A / 48A
ABRASIVE.	Ceramic Alumina	Aluminum Oxide

		DNAINU.			32A / 48A		_	38A / 25A / 53A	
		TRADENAME:					_		
		ABRASIVE:		Alumina		ım Oxide	I		um Oxide
SIZE (D x T x H)		K. RPM MIN./STD. PKG.	SPEC.	PART #	SPEC.	PART #	MIN./STD. PKG.	SPEC.	PART #
Type 05 Recessed One	Side								
14 x 1-1/2 x 5 Rec 1/S 8 x 1/2	1,80 1,80		3SGR46-GVP2 3SGR46-HVP2 3SGR60-HVP2 5SG46-IVS 5SG46-JVS 5SG60-IVS	66253319953 66253319954 66253319956 66253364102 66253364103 66253364104	32A46-HVBE 32A46-IVBE 32A46-KVBE 32A60-JVBE 32A60-KVBE 48A46-HVP2	66253364359 66253364300 66253364362 66253364364 66253364365 66253319958			
	1,80	0 1/-	5SG60-JVS	66253364105					
14 x 2 x 5 Rec 1/S 8 x 1/2	2,32 2,32 2,32	0 1/-	3SGR46-GVP2 3SGR46-HVP2	66253319936 66253319937	48A46-HVP2	66253319941	1/- 1/- 1/-	25A46-HVP2 38A46-HVP2 38A60-HVP2	66253319945 66253319949 66253319951
14 x 2 x 5	1,80				32A60-KVBE	66253364390			
Rec 1/S 8 x 1	1,80	0 1/-			32A60-LVBE	66253364525			
Type 06 Straight Cup	l								
3-1/2 x 1-1/2 x 1/2 Rim 1/2" Back 1/2"	6,55	0					1/10	38A60-KVBE	66243529372
100mm x 50mm x 20mm Rim 10mm Back 13mm	6,55	0					1/10	38A80-JVBE	66243530429
4 x 1-1/2 x 1/2 Rim 1/2" Back 1/2"	5,73	0 1/10			32A60-KVBE	66243530218			
4 x 1-1/2 x 1-1/4 Rim 1/2" Back 1/2"	5,73	0					1/10	38A60-KVBE	66243530221
4 x 2 x 20mm Rim 3/8" Back 1/2"	5,73	0					1/10	38A80-JVBE	66243530523
5 x 1-1/2 x 1-1/4 Rim 3/8" Back 3/8" Face Y (ME19243)	4,58 4,58 4,58	5 1/10			32A46-KVBE 32A60-JVBE 32A60-KVBE	66252830832 66252830837 66252830838	1/10	38A46-KVBE 38A60-KVBE	66252830842 66252830846
5 x 2 x 5/8 Rim 1/2" Back 1/2"	4,58	5 1/10			32A60-JVBE	66252830987			
6 x 1-1/2 x 1/2 Rim 1" Back 1/2"	3,82	0 1/10			32A46-KVBE	66252838458			
6 x 2 x 1-1/4 Rim 1/2" Back 1/2"	3,82 3,82				32A46-IVBE 32A60-JVBE	66252838544 66252838538	1/10	38A60-KVBE	66252838486
7 x 2 x 1-1/4 Rim 1/2" Back 1/2"	3,27	5 1/8			32A46-JVBE	66252942856			
9-1/2 x 1-1/2 x 1-1/2 Rim 1-1/2" Back 5/8"	2,41	5					1/-	53A46-LVBE	66253149136
10 x 4 x 1-1/2 Rim 1-1/4" Back 1" Tape Wound	2,29	5					1/-	38A46-IVBE	66253161797
12 x 2-1/2 x 7 Rim 1-1/2" Back 7/8"	1,91	0 1/-			32A46-LVBE	66253263614			
Type 07 Recessed Two	Sides								
12 x 2 x 3 Rec 2/S 5-1/2 x 3/8	2,07	0 1/-			32A46-IVBE	66253263588			
12 x 2 x 3 Rec 2/S 7-1/4 x 1/2	2,07 2,07				32A46-HVBE 32A46-JVBE	66253263590 66253263348			
12 x 2 x 5 Rec 2/S 7-1/4 x 1/2	2,07				32A46-IVBE	66253263594			
12 x 2 x 5 Rec 2/S 7-1/2 x 1/2	2,07 2,07 2,07 2,07 2,07	0 1/- 0 1/- 0 1/-	5SG46-JVS	66253209930	32A46-HVBE 32A46-HVBEP 32A46-JVBE 32A46-KVBE 32A60-IVBE	66253263591 66253263603 66253263483 66253263596 66253263597	1/-	38A46-IVBE	66253263600

<sup>• 14&</sup>quot; TYPE 05 WHEEL MAXIMUM RPM: NORPOR VP2 WHEELS = 2,320; ALL OTHERS = 1,800

## **How to Read an Abrasive Product Specification**

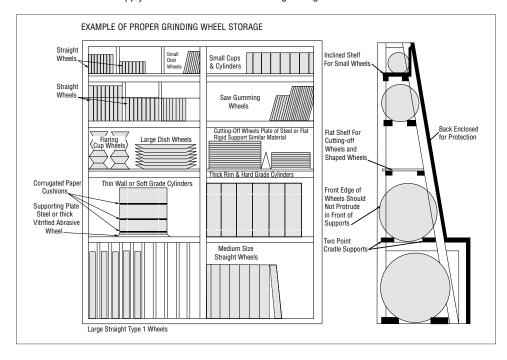


## **Shelf Life and Proper Storage of Grinding Wheels**

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.