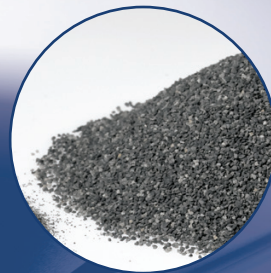
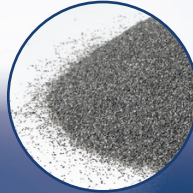


# NorZon NV: BONDED APPLICATIONS



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## DESCRIPTION

NorZon NV, manufactured by St. Gobain Specialty Grains & Powders, is a sharp abrasive used for producing organic bonded grinding wheels. It is produced by fusing zircon sand and alumina at about 1900°C in an electric arc furnace. It is a hard, very tough material. Standard NV product is 1610 (strong shape). Other variations available are NV 1618 (ultra strong shape, treated), 1612 (strong shape, treated)

## APPLICATIONS

NorZon NV is especially suited for use in bonded abrasive applications where rapid medium-to-heavy stock removal is required. It works well on mild stainless and high alloy steels, using low power, low pressure grinding systems.

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## TYPICAL CHEMICAL ANALYSIS

Al <sub>2</sub> O <sub>3</sub>	53.0% - 60.0%	Na <sub>2</sub> O	0.05% max
ZrO <sub>2</sub>	39.00% - 42.5%	CaO	0.13% max
TiO <sub>2</sub>	2.00 % max	MgO	0.05% max
SiO <sub>2</sub>	0.60 % max	Y <sub>2</sub> O <sub>3</sub>	0.80% max
Fe <sub>2</sub> O <sub>3</sub>	0.20% max		

## GRAIN SIZES AVAILABLE

8, 10, 12, 14, 16, 20, 24, 30, 36, 46, 54, 60, 70, 80, 90, 100, 120, 150, 180, 220.

*specialty sizes available upon request*

## TYPICAL PHYSICAL PROPERTIES

Color	Gray
True Density	4.68 gms/cc
Vickers Hardness	19 GPA for 50 gram load
Melting Point	1890° C
Loose Pack Density	1.90 - 2.30 gms/cc
Grading	Modified ANSI
Crystal Size	10 - 15 microns

## TYPICAL LOOSE PACK DENSITY 1610

Grit	g/cc	Grit	g/cc	Grit	g/cc	Grit	g/cc
12	2.185 – 2.305	16	2.115 – 2.235	24	2.095 – 2.215	36	1.970 – 2.090
14	2.165 – 2.285	20	2.100 – 2.220	30	2.030 – 2.150		

This product information is NOT a specification. It is offered in good faith only as a general description of the product. **Washington Mills makes no warranty of merchantability or of fitness for any particular purpose.** The product chemistry and other characteristics may vary or contain trace elements not specifically listed. If your intended application for this product is so critical that relatively minor variations in chemistry or physical properties could cause problems or damage to your process or product, please contact our office for further assistance.

# NorZon NV: BONDED APPLICATIONS (PG.2)

## SIEVE ANALYSES

NV 1610 abrasive is produced according to procedure described in ANSI B.74.12-2001 i.e. 100 gram sample sieved for five minutes on a Rotap using U.S. Standard brass sieves with St. Gobain Grains & Powders modified ANSI limits as follows:

### U.S. STANDARD SIEVES/LIMITS

Size	Oversize	Coarse Grit	1st Nominal	2nd Nominal	Pan
12	$\frac{+7}{0}$	$\frac{+10}{0-20}$	$\frac{+12}{45+}$	$\frac{+12+14}{70+}$	$\frac{-16}{0-3}$
14	$\frac{+8}{0}$	$\frac{+12}{10-35}$	$\frac{+14}{30-60}$	$\frac{+14+16}{55+}$	$\frac{-18}{0-3}$
16	$\frac{+10}{0}$	$\frac{+14}{1-20}$	$\frac{+16}{25-55}$	$\frac{+16+18}{55+}$	$\frac{-20}{0-6}$
20	$\frac{+12}{0}$	$\frac{+16}{0-20}$	$\frac{+18}{20-50}$	$\frac{+18+20}{60+}$	$\frac{-25}{0-10}$
24	$\frac{+16}{0}$	$\frac{+20}{15-40}$	$\frac{+25}{35-65}$	$\frac{+25+30}{55+}$	$\frac{-35}{0-3}$
30	$\frac{+18}{0}$	$\frac{+25}{10-35}$	$\frac{+30}{40+}$	$\frac{+30+35}{55+}$	$\frac{-40}{0-3}$
36	$\frac{+20}{0}$	$\frac{+30}{0-25}$	$\frac{+35}{45+}$	$\frac{+35+40}{65+}$	$\frac{-45}{0-3}$
46	$\frac{+30}{0}$	$\frac{+40}{0-30}$	$\frac{+45}{40+}$	$\frac{+45+50}{65+}$	$\frac{-60}{0-3}$
54	$\frac{+35}{0}$	$\frac{+45}{0-30}$	$\frac{+50}{40+}$	$\frac{+50+60}{65+}$	$\frac{-70}{0-3}$
60	$\frac{+40}{0}$	$\frac{+50}{0-30}$	$\frac{+60}{40+}$	$\frac{+60+70}{65+}$	$\frac{-80}{0-3}$
70	$\frac{+45}{0}$	$\frac{+60}{0-25}$	$\frac{+70}{40+}$	$\frac{+70+80}{65+}$	$\frac{-100}{0-3}$
80	$\frac{+50}{0}$	$\frac{+70}{0-25}$	$\frac{+80}{40+}$	$\frac{+80+100}{65+}$	$\frac{-120}{0-3}$
90	$\frac{+60}{0}$	$\frac{+80}{0-20}$	$\frac{+100}{40+}$	$\frac{+100+120}{65+}$	$\frac{-140}{0-3}$
100	$\frac{+70}{0}$	$\frac{+100}{0-20}$	$\frac{+120}{40+}$	$\frac{+120+140}{65+}$	$\frac{-200}{0-3}$
120	$\frac{+80}{0}$	$\frac{+120}{0-20}$	$\frac{+140}{40+}$	$\frac{+140+170}{65+}$	$\frac{-230}{0-3}$
150	$\frac{+100}{0}$	$\frac{+140}{0-15}$	$\frac{+170+200}{40+}$	$\frac{+170+200+230}{65+}$	$\frac{-325}{0-3}$
180	$\frac{+120}{0}$	$\frac{+170}{0-15}$	$\frac{+200+230}{40+}$	$\frac{+200+230+270}{65+}$	
220	$\frac{+140}{0}$	$\frac{+200}{0-15}$	$\frac{+230+270}{40+}$	$\frac{+200+270+325}{65+}$	
240	$\frac{+170}{0}$	$\frac{+200}{0-5}$	$\frac{+230+27}{8+}$	$\frac{+230+270+325}{38+}$	

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