

CERPASS XTL®

CERPASS XTL®, the original seeded gel product, offers the most durable ceramic grains available today. The unique nano-structure of the grains, composed of extremely uniform, sub-micron crystals, are designed to fracture conchoidally when stressed. The combination of grain shape and microstructure allows for an aggressive cutting but long-lasting ceramic grain ideal for use in organic and vitrified bond-systems.

Physical Properties: (Typical)

Compound	Alpha Aluminum Oxide	Hardness (GPa)^A	21.60
Color	White Translucent to Off-White/ Opaque	Density (g/cm³)^B	3.91
Shape	Weak and Splintery	Crystal Size (µm)^C	0.17

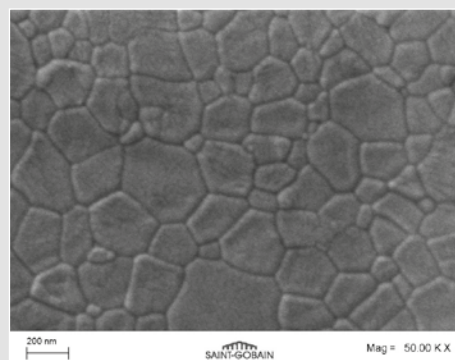
A: by Vickers Diamond Indent Method B: by Helium Pycnometry
C: by Uncorrected Intercept Method of SEM Photographs

Chemical Properties: (Typical)

Predominant Chemical Composition		Al ₂ O ₃ ≥ 99.6 %	
Trace Chemical Composition			
Constituent	Typical PPM	Constituent	Typical PPM
TiO ₂	< 2,000	CaO	< 100
SiO ₂	< 700	Fe ₂ O ₃	< 200
Na ₂ O	< 100	MgO	< 150



Macrostructure of individual Weak Splintery-shaped CERPASS XTL®-0570 grains.



An actual scanning electron microscope (SEM) photograph, at 50,000 magnification, shows the unique and sub-micron crystal structure of CERPASS XTL® grains.

Product Availability: Macro-Sized Grains – Treated and Untreated

CERPASS® Code	Macro Grain Shape	Treatment	Sizing	Grit Sizes
XTL-0570	Weak, Splintery	Untreated	FEPA-P	P24, 36T ¹ , 40T ¹ , 50T ¹ , 60T ¹ , P80, P100, P120, P150, P180 & P220
XTL-0580	Weak, Splintery	Treated Magnesium Chloride	FEPA-P	P24, 36T ¹ , 40T ¹ , 50T ¹ , 60T ¹ , P80 & P100

¹ Sizing slightly modified from FEPA-P sizing standard

Loose Pack Density (LPD) Limits: (Macro Sizes)

LPD: Codes XTL-0570 and XTL-0580 - Weak, Splintery Shape

American National Standards Institute (ANSI), ANSI B74.4-1992 (R2002), and Fédération Européenne des Fabricants de Produits Abrasifs (FEPA-F), FEPA-standard 44-GB-1986 R 1993.

Grit Size	Lower Limit (g/cm ³)	Upper Limit (g/cm ³)	Grit Size	Lower Limit (g/cm ³)	Upper Limit (g/cm ³)
P24	1.80	1.90	P100	1.65	1.75
36T'	1.77	1.87	P120	1.63	1.73
40T'	1.76	1.86	P150	1.63	1.73
50T'	1.75	1.85	P180	1.62	1.72
60T'	1.74	1.84	P220	1.62	1.72
P80	1.65	1.80			

¹ Sizing slightly modified from FEPA-P sizing standard LPD measured on untreated grains

Sizing Convention and Specifications:

Sizing Fractions - Distribution Control

CERPASS® Codes XTL-0570 and XTL-0580 are processed to Fédération Européenne des Fabricants de Produits Abrasifs (FEPA-P), FEPA-standard 43-GB-1984 R 1993.

	Control Screen Coarse Grain	Oversize	First Nominal	Second Nominal	Third Nominal	Control Screen Fine Grain
Grit Size	Test Sieve 1	Test Sieve 2	Test Sieve 3	Test Sieve 4	Test Sieves 5	
P24	+14/0	+18/(0-1)	(+18+20)/(10-18)	(+18+20+25)/(52-70)	(+18+20+25+30)/92+	-30/(0-8)
36T'	+18/0	+25/(0-1)	(+25+30)/(14-22)	(+25+30+35)/(56-74)	(+25+30+35+40)/90+	-40/(0-10)
40T'	+25/0	+35/(8-15)	(+35+40)/(57-73)	(+35+40+45)/91+	(+35+40+45+50)/97+	-50/(0-3)
50T'	+30/0	+40/(3-10)	(+40+45)/(36-52)	(+40+45+50)/(80-92)	(+40+45+50+60)/94+	-60/(0-6)
60T'	+35/0	+45/(0-7)	(+45+50)/(15-35)	(+45+50+60)/(56-74)	(+45+50+60+70)/92+	-70/(0-8)
P80	+45/0	+60/(0-3)	(+60+70)/(20-32)	(+60+70+80)/(66-84)	(+60+70+80+100)/96+	-100/(0-4)
P100	+50/0	+70/(0-1)	(+70+80)/(10-18)	(+70+80+100)/(52-70)	(+70+80+100+120)/92+	-120/(0-8)
P120	+70/0	+100/(0-7)	(+100+120)/(34-50)	(+100+120+140)/(80-92)	(+100+120+140+170)/96+	-170/(0-4)
P150	+80/0	+120/(0-3)	(+120+140)/(20-32)	(+120+140+170)/(66-84)	(+120+140+170+200)/96+	-200/(0-4)
P180	+100/0	+140/(0-2)	(+140+170)/(10-20)	(+140+170+200)/(50-74)	(+140+170+200+230)/90+	-230/(0-10)
P220	+120/0	+170/(0-2)	(+170+200)/(10-20)	(+170+200+230)/(50-74)	(+170+200+230+270)/90+	-270/(0-10)

¹ Sizing slightly modified from FEPA-P sizing standard

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