

## CERPASS DGE®

**CERPASS DGE®** is a next-generation seeded gel product that offers extreme angularity achieved by Saint-Gobain's globally patented explosion technology. CERPASS DGE® abrasive grain has the same unique nano-structure as CERPASS XTLE®. This unique microstructure, composed of extremely uniform, sub-micron crystals, is designed to fracture conchoidally when stressed. The combination of the grains' extreme sharpness and microstructure allows for an aggressive cutting and long-lasting ceramic grain ideal for low-pressure tough-to-grind applications.

### Physical Properties: (Typical)

<b>Compound</b>	Alpha Aluminum Oxide	<b>Hardness (GPa)<sup>A</sup></b>	21.60
<b>Color</b>	White Translucent to Off-White/ Opaque	<b>Density (g/cm<sup>3</sup>)<sup>B</sup></b>	3.91
<b>Shape</b>	Extra Sharp	<b>Crystal Size (µm)<sup>C</sup></b>	0.17

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

### Chemical Properties: (Typical)

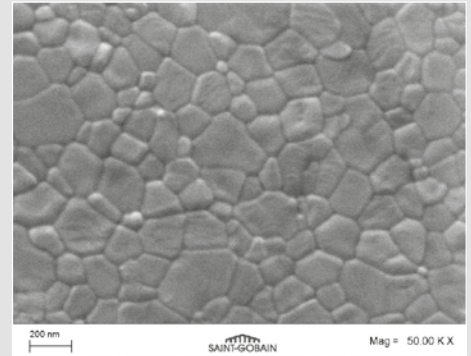
<b>Predominant Chemical Composition</b>		Al <sub>2</sub> O <sub>3</sub> ≥ 99.6 %	
<b>Trace Chemical Composition</b>			
<b>Constituent</b>	<b>Typical PPM</b>	<b>Constituent</b>	<b>Typical PPM</b>
TiO <sub>2</sub>	< 2,000	CaO	< 100
SiO <sub>2</sub>	< 700	Fe <sub>2</sub> O <sub>3</sub>	< 200
Na <sub>2</sub>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

### Product Availability: Macro-Sized Grains - Untreated

CERPASS® Code	Macro Grain Shape	Treatment	Sizing	Grit Sizes
DGE-0789	Extra Sharp	Untreated	FEPA-F	24, 30, 36, 46, 54, 60, 70, 80



Macrostructure of individual Extra Sharp exploded CERPASS DGE®-0789 grains.



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

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

### LPD: Codes DGE-0789 - Extra Sharp Shape

Européenne des Fabricants de Produits Abrasifs (FEPA-F), FEPA-standard 44-GB-1986 R 1993.

Grit Size	Lower Limit (g/cm <sup>3</sup> )	Upper Limit (g/cm <sup>3</sup> )	Grit Size	Lower Limit (g/cm <sup>3</sup> )	Upper Limit (g/cm <sup>3</sup> )
24	1.53	1.65	54	1.57	1.69
30	1.53	1.65	60	1.58	1.70
36	1.53	1.65	70	1.59	1.71
46	1.56	1.68	80	1.59	1.71

## Sizing Convention and Specifications:

### Sizing Fractions - Distribution Control

CERPASS® Code DGE-0789 - Extra Sharp Shape is processed to Fédération Européenne des Fabricants de Produits Abrasifs (FEPA-F), FEPA-standard 42-GB-1984 R 1993.

	Control Screen Coarse Grain	Oversize	First Nominal	Second Nominal	Control Screen Fine Grain
Grit Size	Test Sieve 1	Test Sieve 2	Test Sieve 3	Test Sieve 3 & 4	
24	+16/0	+20/(0-25)	+25/45+	(+25+30)/65+	-35/(0-3)
30	+18/0	+25/(0-25)	+30/45+	(+30+35)/65+	-40/(0-3)
36	+20/0	+30/(0-25)	+35/45+	(+35+40)/65+	-45/(0-3)
46	+30/0	+40/(0-30)	+45/40+	(+45+50)/65+	-60/(0-3)
54	+35/0	+45/(0-30)	+50/40+	(+50+60)/65+	-70/(0-3)
60	+40/0	+50/(0-30)	+60/40+	(+60+70)/65+	-80/(0-3)
70	+45/0	+60/(0-25)	+70/40+	(+70+80)/65+	-100/(0-3)
80	+50/0	+70/(0-25)	+80/40+	(+80+100)/65+	-120/(0-3)

### For more information, please contact:

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