

Cerpass MGE™

Microgrits for abrasive tools



CERPASS MGE™ the original seeded gel product, is the most durable ceramic micro abrasive grain available. The unique nano-structure of the grains, composed of extremely uniform, submicron crystals, is designed to fracture conchoidally when stressed. The combination of grain shape and microstructure creates an aggressive cutting but long-lasting ceramic grain.

Applications: Because of its durability and ability to maintain an aggressive cutting edge, CERPASS MGE™ performs superbly in Coated Abrasive and Bonded Abrasive applications.

Physical properties (typical)

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

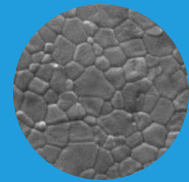
A: by Vickers Diamond Indent Method

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	<2000	CaO	<100
SiO ₂	<700	Fe ₂ O ₃	<200
Na ₂ O	<100	MgO	<150



CERPASS™ Crystal Structure

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Available sizes: M-sizing standard

Cerpass® Code 0755	Approximate Fepa Sizes	Microns			
		d0%	d3%	d50%	d95%(target)
M45	F240/P320	94.0	66.8	44.7-47.7	34.0
M40	P360	87.0	60.3	39.0-42.0	30.0
M36	F280/P400	81.0	53.9	33.5-36.5	25.0
M30	F320/P500	77.0	48.3	28.7-31.7	22.0
M26	P600	70.0	43.0	24.8-26.8	18.0
M23	F360/P800	72.0	38.1	20.8-22.8	15.0
M17	F400/P1000	42.0	29.0	16.0-18.5	11.0
M13	F500/P1500	34.0	24.0	12.5-14.0	8
M8	F600/P2500	26.0	18.0	7.5-9.0	5
M6	F800	25.0	14.0	5.0-7.5	2
M4	F1000	24.0	10.0	3.7-4.3	1

The values listed above are based on Coulter Multisizer particle size analysis

Available sizes: P240 and P280

Cerpass Code 0570	Control Screen Coarse grain	Over-size	First Nominal	Second nominal	Third nominal	Control Screen Fines Grain	Loose Pack Density (LPD) [g/cm ³]	
							Low	High
Grit Size	Test Sieve 1	Test Sieve 2	Test Sieve 3	Test Sieve 3 & 4	Through Test Sieve 5			
P240	+140/0	+200/(0-2)	+200+230/(10-20)	+200+230+270/(30-55)	+200+230+270+325/(75+)	-325/(0-25)	1.50	1.70
P280	+170/(0)	+230/(0-2)	+230+270/(10-20)	+230+270+325/(30-55)	+230+270+325+400/(75+)	-400/(0-25)	1.45	1.65

For more information, please contact:

Saint-Gobain Ceramic Materials Specialty Grains and Powders

1 New Bond Street
M/S 525-203
PO Box 15137
Worcester, MA 01615-0137
USA
Tel: +1 800 243 0028
Fax: +1 508 795 2380

Saint-Gobain K.K. CM Division

Kitahama 1-Chome Heiw a Bldg.
7F
1-1-14, Kitahama, Chuo-ku,
Osaka
541-0041 Japan
Tel: +81 6 4707 1700 (main)
Fax: -81 6 4707 1701

Saint-Gobain Ceramic Materials Specialty Grains and Powders

7th Floor, Office Tower
No. 222 East Yan'an Road
Bund Center
Shanghai 200002 China
Tel: +86 21 6361 7731

Saint-Gobain Ceramic Materials GmbH Specialty Grains and Powders

Branch office
Concordiaplatz 351143
Köln Germany
Tel: +49 2203 956 468
Fax: +49 2203 956 421

cermatworcester@Saint-Gobain.com
www.abrasivematerials.saint-gobain.com

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