U.S. ELECTROFUSED MINERALS, INC.

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MAXCAL - BROWN ALUMINUM OXIDE

Low Titania Brown Fused Alumina (Al_2O_3) for coated abrasives

MAXCAL is a special brown fused aluminum oxide developed for high performance abrasive produtcs. MAXCAL is low titania content product, heat treated in a rotary kiln at high temperatures and magnetic treated. These procedures guarantee low iron content and excellent grit stability.

Typical Physical Properties

True Specific Gravity	Knoop 100 Hardness	Toughness (ANSI-B74.8R2007)
3.94 g/cm³	2,100 kg/cm²	54%

Typical Chemical Analysis by XRF (%)

Al_2O_3	TiO_2	SiO_2	Fe_2O_3
97.68	1.23	0.52	0.14

Types of Treatment

Not Treated	Red Coated (RC)*	Silane Treated (ST)*
MAXCAL L	MAXCALRC L	MAXCALST L

Bulk Density (g/cm³)

Grit Size	(L) sharp
12	1.85
16	1.85
20	1.84
24	1.84
30	1.80
36	1.80
40	1.75
50	1.73
60	1.73
80	1.70
100	1.64
120	1.61
150	1.55
180	1.55
220	1.55

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*Treatment (RC or ST) can affect bulk density by ± 0.05 g/cm³

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LOW TITANIA BROWN FUSED ALUMINA (AL_2O_3) FOR COATED ABRASIVES

ABOUT:

MAXCAL is a special brown fused aluminum oxide developed for high performance abrasive products. MAXCAL is low titania content product, heat treated in a rotary kiln at high temperatures and magnetic treated. These procedures guarantee low iron content and excellent grit stability.

TYPICAL CHEMICAL ANALYSIS	
Al_2O_3	97.74%
TiO_2	1.29
SiO_2	0.51
Fe_2O_3	0.13
MgO	0.05

TYPICAL PHYSICAL PROPERTIES	
Specific Gravity:	3.94 g/cc
Knoop 100 Hardness:	1900 kg/cm^2
Toughness:	46% (ANSI-B74.8 R2007)

TYPES OF TREATMENT	
Treatment	***SHAPE***
	Angular
Not Treated	MAXCAL L
Red Coated (RC)*	MAXCALRC L
Silane Treated (ST)*	MAXCALST L

BULK DENSITY (g/cc)

Grit Size	L	Grit Size	L
12	1.80 - 1.90	60	1.65 - 1.75
16	1.80 - 1.90	80	1.62 - 1.72
20	1.79 - 1.89	100	1.60 - 1.70
24	1.79 - 1.89	120	1.57 - 1.67
30	1.75 - 1.85	150	1.50 - 1.60
36	1.75 - 1.85	180	1.50 - 1.60
40	1.70 - 1.80	220	1.50 - 1.60
50	1.66 - 1.76		

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