



BTCAL – BROWN ALUMINUM OXIDE

HEAT TREATED BROWN FUSED ALUMINA (AL₂O₃) FOR BONDED ABRASIVES

ABOUT:

BTCAL is a brown aluminum oxide obtained by a reduction fusion of high quality bauxites in electric arc furnaces. BTCAL is heat treated in a rotary kiln at high temperatures and magnetic treated. These procedures guarantee low iron content and high toughness. BTCAL is recommended for high performance grinding wheels

TYPICAL CHEMICAL ANALYSIS

Al ₂ O ₃	95.69%
TiO ₂	2.66
SiO ₂	0.83
Fe ₂ O ₃	0.28
MgO	0.29

TYPICAL PHYSICAL PROPERTIES

Specific Gravity:	3.96 g/cc
Knoop 100 Hardness:	1850 kg/cm ²
Toughness:	48% (ANSI-B74.8 R2007)

TYPES OF TREATMENT

Treatment	SHAPE		
	Sharp	Blocky	Super Blocky
Not Treated	BTCALLD R	BTCAL R	BTCALHD R
Red Coated (RC)*	BTCALLDRC R	BTCALRC R	BTCALHDRC R
Silane Treated (ST)*	BTCALLDST R	BTCALST R	BTCALHDST R

BULK DENSITY (g/cc)

Grit	LD	R	HD	Grit	LD	R	HD
10	1.78 - 1.88	1.88 - 1.98	1.98 - 2.08	54	1.67 - 1.77	1.78 - 1.88	1.88 - 1.98
12	1.78 - 1.88	1.88 - 1.98	1.98 - 2.08	60	1.66 - 1.76	1.75 - 1.85	1.85 - 1.95
14	1.78 - 1.88	1.88 - 1.98	1.98 - 2.08	70	1.64 - 1.74	1.73 - 1.83	1.78 - 1.88
16	1.76 - 1.86	1.86 - 1.96	1.96 - 2.06	80	1.60 - 1.70	1.68 - 1.78	1.78 - 1.88
20	1.76 - 1.86	1.86 - 1.96	1.95 - 2.05	90	1.60 - 1.70	1.68 - 1.78	1.78 - 1.88
24	1.76 - 1.86	1.86 - 1.96	1.95 - 2.05	100	1.55 - 1.70	1.64 - 1.74	1.74 - 1.84
30	1.76 - 1.86	1.86 - 1.96	1.94 - 2.04	120	1.54 - 1.64	1.62 - 1.72	1.72 - 1.82
36	1.75 - 1.85	1.86 - 1.96	1.94 - 2.04	150	1.53 - 1.63	1.61 - 1.71	1.71 - 1.81
40	1.72 - 1.82	1.80 - 1.90	1.90 - 2.00	180	1.51 - 1.61	1.58 - 1.68	1.68 - 1.78
46	1.72 - 1.82	1.80 - 1.90	1.90 - 2.00	220	1.50 - 1.60	1.56 - 1.66	1.66 - 1.76

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

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USEM

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