

# C.D.S. CONSULTANTS

## HEALTH & SAFETY DATA SHEET

### VIRGIN BROWN ALUMINIUM OXIDE

#### Physical Data

Chemical Composition	.....	Aluminium Oxide: A12 03
Appearance	.....	Angular Grains
Colour	.....	Brown – Grey
Odour	.....	None

#### Safety Data

Melting Point	.....	1950 – 2050 degrees C
Density	.....	3.9 – 4.0 g/cm <sup>3</sup>
Bulk Density	.....	500 – 2300 depending on grain size
Solubility in water	.....	Insoluble
Hazardous reactions	.....	None

#### Transport

Not classified, not hazardous

#### Regulations

Aluminium Oxide is, within the European legislation, an item falling under EINECS\* and is registered as follows: - Aluminium Oxide (A12 03) 2156916

\*EINECS = European Inventory of Existing Commercial Chemical Substances

#### Protective measures, storage, handling

**Industrial Hygiene**      Respiratory protective device (fine dust breathing mask) required only if the stipulated dust concentration limit for A12 03 is exceeded.

**Fire & Explosion**      None

**Disposal**                      If the regulations of Local Authorities are observed Aluminium Oxide can be disposed of without any additional measures.

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## TECHNICAL DATA

### VIRGIN BROWN ALUMINA

#### Typical Chemical Analysis

AL2O3	.....	95.60%
SiO2	.....	1.20%
TiO2	.....	2.60%
Fe2O3	.....	0.18%
MgO	.....	0.45%
CaO	.....	0.05%

**Colour:** Grey – Brown  
**Grain Shape:** Cubical, Sharp Edged  
**Hardness:** Average 1700 – 2000k 100  
9 MOH's scale  
**Specific Gravity:** 3.94 G/CM3  
**Melting Point:** Over 1950 Degrees C  
**Grit Size Available** FEPA Grain sizes:  
8, 10, 12, 14, 16, 18, 20, 22, 24, 30, 36, 40, 46,  
54, 60, 70, 80, 90, 100, 120, 150, 180, 220.  
  
MIXED Grain sizes:  
24/30 30/40 40/60 60/80 80/120

#### Bulk Density – FEPA Method

Grit No.	KG/1000 CM3	Grit No.	KG/1000CM3
8	1.94 – 2.04	46	1.72 – 1.83
10	1.92 – 2.02	54	1.70 – 1.80
12	1.90 – 2.00	60	1.66 – 1.76
14	1.88 – 1.98	70	1.88 – 1.98
16	1.86 – 1.96	80	1.64 – 1.72
20	1.84 – 1.94	90	1.62 – 1.72
22	1.82 – 1.92	100	1.60 – 1.70
24	1.80 – 1.90	120	1.58 – 1.68
30	1.78 – 1.88	150	1.56 – 1.66
36	1.76 – 1.86	180	1.54 – 1.64
40	1.74 – 1.84	220	1.53 – 1.63