

Safety Data Sheet Premium Brown Aluminium Oxide

Trade Name: Premium Brown Aluminium Oxide
Grades: FEPA F and P grit in macro range 8 to 220 and micro 240 to 1200, bespoke and blended grades on request
Original Issue Date: September 2012 (as MSDS 37)
This Issue: November 2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Name: Brown Fused Aluminium Oxide
Product Description: Brown Fused Alumina
EINECS: There are no CAS or EC numbers for fused alumina in its entirety. Numbers for the constituent parts/compounds are shown below.
CAS:

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use: Blast cleaning abrasive specifically approved for aerospace applications.

The substance does not meet the criteria for classification as dangerous according to EC1272/2008 and is not PBT or vPvB. This product range is not hazardous according to Directive 67/548/CE and 1272/2008/CE. This product has been REACH registered under submission number **JL942654-25** and REACH registration number **01-2119529248-35-0096**.

1.3 Details of supplier of the safety data sheet

Hodge Clemco Ltd, Orgreave Drive, Sheffield S13 9NR, U.K.

Email address of person: sales@hodgeclemco.co.uk

Emergency telephone number of the supplier

Telephone number: +44(0)114 254 8811
Hours of operation: Mon – Fri 08.30 – 1700

SECTION 2: Hazards Identification

2.1 Classification of substance or mixture

Classification according to Regulation(EC) No. 1272/2008 (which supersedes Directive 67/548/EC(DSD))

Classification: Not classified. does not meet the criteria for classification in accordance with the regulations EC1272/2008. No special conditions are therefore needed. Risk management measures due to the potential occurrence of hazardous dusts during use as an abrasive may be needed.

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008 (which supersedes Directive 67/548/EC(DSD))
None

2.3 Other hazards

The substance does not meet the criteria for a PBT or vPvB substance
Use of this material may generate dust so risk management measures may be needed

SECTION 3: Composition/information on ingredients

There are no CAS or EC numbers for brown fused alumina in its entirety. Numbers for the constituent parts/compounds are shown below.

Substance	Chemical Formula	CAS No	EC No	Typical Content %
Aluminium Oxide	Al ₂ O ₃	1344-28-1	215-691-6	96
Silicon Dioxide (amorphous)	SiO ₂	7631-86-9	231-545-4	0.6-1.2
Titanium Dioxide	TiO ₂	13463-67-7	236-675-5	2.5 - 3.5
Iron Oxide	Fe ₂ O ₃	1309-37-1	215-168-2	0.4
Calcium and Magnesium Oxide	CaO and MgO	1313-59-3 12136-45-7	215-208-9 235-227-6	<0.6
Alkali Metals	Na ₂ O K ₂ O	1313-59-3 12136-45-7	215-208-9 235-227-6	<0.01
Elemental Lead	Pb	N/A	N/A	<1ppm
Acid Extractable Iron	Fe	N/A	N/A	0.025

The material is not considered hazardous in normal use but the following potential hazards should be recognised;

- (a) Dust – inhalation (see below)
- (b) Skin irritation in susceptible individuals

(c) Noxious fumes may evolve during fire

SECTION 4: First Aid Measures

4.1 Description of First Aid Measures

- Inhalation:* Remove to fresh air. Get medical attention if symptoms occur. We recommend the use of approved dust masks or, where abrasive blasting operations are carried out, then appropriate extraction plant should be used and approved breathing apparatus worn by operatives.
- Skin:* Substance is not a skin irritant and not a skin sensitiser. Wash with plenty of water and soap. Remove contaminated clothing and footwear, Get medical advice if symptoms occur. As with any industrial product, contact with skin can cause irritation leading in some cases to dermatitis and it is wise to take the usual precautionary measures of obtaining medical clearance for employees who have a history of skin disease or allergy.
- Eye:* Substance is not an eye irritant. Use general measures if eye irritations occur. Do not rub eyes. Immediately wash with plenty of water. Check for and remove any contact lenses. If irritation persists, get medical attention.
- Ingestion:* No danger known, wash mouth out if appropriate. Do not induce vomiting. Give water to drink.
- Advice to physician:* No specific advice. Treat according to symptoms present.

4.2 Most important symptoms and effects, both acute and delayed.

The product may cause temporary mechanical irritation to the eyes, nose, throat and lungs.

4.3 Indication of any immediate medical attention and special treatment needed.

Notes for the doctor. Treat symptomatically.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

The product is non-combustible. Use an extinguishing agent appropriate to the surrounding materials.

5.2 Special hazards arising from the substance or mixture

This product will not ignite as a dust in its own right in any suspended dust concentrations. The product is an inert thermal resistant electro mineral up to its physical decomposition point. Consideration of dust explosion levels must however be considered where a substrate being processed creates a possible explosive dust. In this instance refer to the component/metal/substrate suppliers data pertaining to its respective characteristics.

5.3 Advice for fire-fighters

Wear self-contained breathing apparatus and protective clothing.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid breathing dust. Use appropriate personal protective equipment. Observe OELs detailed in section 8.

6.2 Environmental precautions

Make sure spills can be contained. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and clean-up

Ventilate the area thoroughly. Vacuum or sweep up material and place in a suitable container for re-cycling or disposal.

6.4 References to other sections

Section 1 for emergency contact information
Section 8 for information on personal protective equipment
Section 13 for Waste Disposal

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Fused alumina is not classified and no protective measures are needed for safe handling. Prevent formation of dust. Use only in well ventilated areas. Wear personal protective clothing. Wash hands and face before breaks and after work.

7.2 Conditions for safe storage including any incompatibilities

Keep dry. No other special requirements.

7.3 Specific end uses

Abrasive blast cleaning may fracture the product and generate dust. Ventilate work area in vicinity of operator

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters of relevance to industrial settings (occurrence of dusts, mists and fumes)

Engineering Measures:

Preferred methods of use are either in a blast cabinet with a dust collector or in a closed-circuit blasting system. If a blast room is used it must have a dust extraction system to keep dust levels below the occupational exposure limits.

For use in refractory linings, slip resistant products, bonded and coated abrasive, ceramic materials and other applications where product is added, poured or applied, the occupational exposure limits for the product must be adhered to.

8.2 Occupational Exposure Limits

All dusts have been assigned exposure limits. The following information has been taken from Guidance Note EH40/2005 from the Health and Safety Executive (Occupational Exposure Limits 2005).

Compound	Formula	Typical Content %	CAS No	EC No	Exposure Limit Values as per EH40/2005 WELs(UK)	
					Total inhalable	Respirable
Aluminium Oxide	Al ₂ O ₃	>88	1344-28-1	215-691-6	10mg/m ³	4mg/m ³
Silicon Dioxide (amorphous)	SiO ₂	0.6-1.2	7631-86-9	231-545-4	6 mg/m ³	2.4 mg/m ³
Titanium Dioxide	TiO ₂	2.3-3.5	13463-67-7	236-675-5	10 mg/m ³	4 mg/m ³
Iron Oxide	Fe ₂ O ₃	0.4	1309-37-1	215-168-2	-	5 mg/m ³
Other total oxides, trace amounts						

8.2.1 Personal Protective Equipment

Respiratory & Eye Protection: Blasting operatives in a blast room should wear a CE marked or HSE approved blasting helmet. Ancillary workers should use a P2 dust respirator and safety goggles.

Skin & Hand Protection: Operatives should always wear appropriate gauntlets. Operatives should wear heavy-duty coveralls or a purpose designed blasters' suit.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<i>Appearance:</i>	Solid, angular particles
<i>Colour;</i>	Brown
<i>Odour</i>	None
<i>Odour threshold:</i>	Not applicable
<i>pH:</i>	Not applicable
<i>Melting point:</i>	>2000°C
<i>Flammability (solid/gas):</i>	Non-flammable
<i>Upper/lower flammability or explosive limits</i>	Not applicable
<i>Relative Density (ref water at 20°C)</i>	3.95
<i>Bulk Density:</i>	1.64 – 1.88 Kg/dm ³
<i>Solubility:</i>	Insoluble in water
<i>Hardness:</i>	9 Moh

Typical Conductivity:

36 mesh = 0.0685mS/cm
80 mesh = 0.0778mS/cm
120 mesh = 0.0745mS/cm

9.2 Other information

Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not applicable.

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

No hazardous reactions known

10.4 Conditions to avoid

Excessive thermal exposure to decomposition points

10.5 Incompatible materials

None known

10.6 Hazardous decomposition products

None, products change from solids to liquids with no adverse decomposition.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Laboratory Data: These materials have been tested for toxicity in line with REACH requirements for submission of the technical dossier as part of the registration for High Volume Industrial Substance. They are not classified under EC directives.

Human Data: The human data available is compiled as part of the FREACH Registration Technical Dos to section 8.2.sier under joint submission for Aluminium Oxides. It is not classified under EC Directives and exposure controls should be adhered to, refer

SECTION 12 Ecological information

12.1 Assessment: Handled correctly these products pose no serious environmental hazard.

12.2 Test Results: Hodge Clemco Ltd has not conducted any environmental studies on these products

directly, but has been part of the Joint Submission Technical Dossier for REACH registration of Aluminium Oxide. These products do not contain any substances that are classified under EC legislation for environmental effects.

SECTION 13: Disposal considerations

The abrasive must be disposed of in accordance with national legislation (See Section 16) and local regulations. The material as supplied is classed as a non-hazardous inert solid waste. Spent abrasive used as a blasting medium must be disposed of under classification 12 01 16 (waste blasting material containing dangerous substances) or 12 01 17 (waste blasting material other than those mentioned in 12 01 16). The waste producer must determine if hazardous substances in the coating being removed are likely to cause the waste to be hazardous.

SECTION 14: Transport information

14.1 Land Transport (ADR/RID)

Not classified according to Transport Regulations for Hazardous/Dangerous Goods

14.2 Marine Transport (IMO/IMD)

Not classified according to Transport Regulations for Hazardous/Dangerous Goods

14.3 Air Transport

Not classified according to Transport Regulations for Hazardous/Dangerous Goods

SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

The product is not hazardous according to Directive 67/548/CE and 1272/2008/CE. This product has been REACH registered under submission number **JL942654-25** and REACH Registration number **01-2119529248-35-0096**.

15.2 Labelling Requirement

Not subject to labelling in accordance with current regulations in force as detailed at 15.1

SECTION 16: Other information

16.1 Intended Use: These products are used as blast medias, slip resistant materials, refractory linings, abrasive aggregates. If they are used for any other purpose, the advice of Hodge Clemco Ltd should be sought regarding any additional hazards that may arise.

16.2 REACH Registration: These materials are registered with ECHA according to REACH regulations for high volume industrial substances.