

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 04/30/2015

Reviewed on 04/30/2015

1 Identification

- **Product identifier**
- **Trade name:** Brown Fused Aluminum Oxide
(Alodur, GF, GF-V, GFK, GFC, A/O, ASF, ASFK, ASFPL, Lionblast, LB, DCF, AOF, ESK, ZESK)
- **Article number:** No other identifiers
- **CAS Number:**
1344-28-1
- **Recommended use and restriction on use**
- **Recommended use:** Abrasives
- **Restrictions on use:** Contact manufacturer.

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

- **Additional information:**

There are no other hazards not otherwise classified that have been identified.
0 percent of the mixture consists of ingredient(s) of unknown toxicity.

- **Label elements**

- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS08

- **Signal word** Warning

- **Hazard-determining components of labeling:**

titanium dioxide

- **Hazard statements**

H351 Suspected of causing cancer.

- **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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- P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard description:**

- **WHMIS-symbols:**

As of 11 February 2015, the current WHMIS system is being replaced by the GHS system. This is the classification under the older system.

D2A - Very toxic material causing other toxic effects



- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1
 Fire = 0
 Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *1
 Fire = 0
 Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

1344-28-1 aluminium oxide

- **Dangerous components:**

13463-67-7 titanium dioxide

Carc. 2, H351

1-5%

4 First-aid measures

- **Description of first aid measures**

- **General information:** No special measures required.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:**
 Brush off loose particles from skin.
 Clean with water and soap.
 If skin irritation is experienced, consult a doctor.
- **After eye contact:**
 Immediately remove contact lenses if possible.
 Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
 Rinse out mouth and then drink plenty of water.
 Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
 Coughing
 Gastric or intestinal disorders
 Breathing difficulty
- **Danger**
 Danger of impaired breathing.
 Suspected of causing cancer.
- **Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** None.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:**
 Wear self-contained respiratory protective device.
 Wear fully protective suit.
- **Additional information** No further relevant information available.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 Use respiratory protective device against the effects of fumes/dust/aerosol.
 For large spills, wear protective clothing.
 Avoid formation of dust.
 Ensure adequate ventilation.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
 Dispose contaminated material as waste according to item 13.
 Send for recovery or disposal in suitable receptacles.

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· **Reference to other sections**

See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 Prevent formation of dust.
 Any deposit of dust which cannot be avoided must be regularly removed.
 Use only in well ventilated areas.
 Avoid breathing dust.
 Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
 Store away from oxidizing agents.
 Store away from foodstuffs.
- **Further information about storage conditions:**
 Store in cool, dry conditions in well sealed receptacles.
 Store receptacle in a well ventilated area.
 Protect from humidity and water.
 This product is hygroscopic.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

1344-28-1 aluminium oxide

PEL (USA)	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m ³ respirable, as Al

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EV (Canada) Long-term value: 10 mg/m³
total dust

LMPE (Mexico) Long-term value: 1* mg/m³
A4, *fracción respirable

13463-67-7 titanium dioxide

PEL (USA) Long-term value: 15* mg/m³
*total dust

REL (USA) See Pocket Guide App. A

TLV (USA) Long-term value: 10 mg/m³
withdrawn from NIC

EL (Canada) Long-term value: 10* 3** mg/m³
*total dust; **respirable fraction; IARC 2B

EV (Canada) Long-term value: 10 mg/m³
total dust

LMPE (Mexico) Long-term value: 10 mg/m³
A4

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid close or long term contact with the skin.

Do not inhale dust / smoke / mist.

· **Engineering controls:** No further relevant information available.

· **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.

For spills, respiratory protection may be advisable.

· **Protection of hands:**

Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules.

Gloves are advised for repeated or prolonged contact.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Eye protection:**



Safety glasses

· **Body protection:**

Not required under normal conditions of use.

Protection may be required for spills.

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- **Limitation and supervision of exposure into the environment** No special requirements.
- **Risk management measures** No special requirements.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Granulate
Color: Light brown
 Dark brown

· **Odor:** Odorless
 · **Odor threshold:** Not determined.

· **pH-value:** Slightly alkaline

· Change in condition

Melting point/Melting range: 2050 °C (3722 °F)
Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.
Upper: Not determined.

· **Vapor pressure:** Not applicable.

· **Density at 20 °C (68 °F):** 3.95 g/cm³ (32.963 lbs/gal)

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

· Solubility in / Miscibility with

Water: Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· Viscosity:

Dynamic: Not applicable.
Kinematic: Not applicable.

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· **Other information**

No further relevant information available.

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10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Reacts with strong acids.
Reacts with oxidizing agents.
Reacts with strong alkali.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Toxic metal oxide smoke

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Slight irritant effect on eyes.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:** Suspected of causing cancer.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Probable Routes of Exposure**

Inhalation.
 Eye contact.
 Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** From product as supplied: None.
- **Repeated Dose Toxicity:**
Suspected of causing cancer.
Repeated or long-term inhalation of product dusts may cause pulmonary disease.
May cause damage to organs through prolonged or repeated exposure.

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** Generally not hazardous for water
- **Persistence and degradability**
Inorganic product, is not eliminable from water by means of biological cleaning processes.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** Does not accumulate in organisms
- **Mobility in soil** No further relevant information available.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Smaller quantities can be disposed of with household waste.
Can be reused after reprocessing.
Contact waste processors for recycling information.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Not Regulated |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Not Regulated |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Not Regulated |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

- **Section 355 (extremely hazardous substances):**

Substance is not listed.

- **Section 313 (Specific toxic chemical listings):**

1344-28-1	aluminium oxide
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- **TSCA (Toxic Substances Control Act):**

Substance is listed.

- **Proposition 65 (California)**

- **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
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- **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity:**

Substance is not listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

Substance is not listed.

- **IARC (International Agency for Research on Cancer)**

13463-67-7	titanium dioxide	2B
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- **TLV (Threshold Limit Value established by ACGIH)**

1344-28-1	aluminium oxide	A4
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13463-67-7	titanium dioxide	A4
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- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide
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- **State Right to Know Listings**

Substance is not listed.

- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

Substance is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

Substance is not listed.

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· Canadian Ingredient Disclosure list (limit 1%)	
1344-28-1	aluminium oxide

- **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 04/30/2015 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Carc. 2: Carcinogenicity, Hazard Category 2