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

1.1 Product identifier
  White Fused Aluminum Oxide
- Other means of identification:
  CAS Number: 1344-28-1
  EC Number: 215-691-6
  Registration Number: 01-2119529248-35-0141

1.2 Relevant identified uses of the substance or mixture and uses advised against
  Application of the substance / the mixture: Industrial uses.
  Uses advised against: No further relevant information available.

1.3 Details of the supplier of the Safety Data Sheet
- Manufacturer/Supplier:
  U.S. Electrofused Minerals, Inc.
  600 Steel Street
  Aliquippa, PA 15001
  Phone: (800) 927-8823

1.4 Emergency telephone number:
  ChemTel Inc.
  (800)255-3924  (North America)
  +1 (813)248-0585 (International)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
  Classification according to Regulation (EC) No 1272/2008
  The substance is not classified as hazardous according to the CLP regulation.

2.2 Label elements
  Labelling according to Regulation (EC) No 1272/2008
  This product does not have a classification according to the CLP regulation.
  - Hazard pictograms Not Regulated
  - Signal word Not Regulated
  - Hazard statements Not Regulated.
  - Precautionary statements Not Regulated.

2.3 Other hazards
  There are no other hazards not otherwise classified that have been identified.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances
  aluminium oxide

(Cont'd. on page 2)
SECTION 4: First aid measures

4.1 Description of first aid measures
- **After inhalation:**
  Respiration of particulates is unlikely during normal usage.
  Supply fresh air; consult doctor in case of complaints.
  Provide oxygen treatment if affected person has difficulty breathing.
- **After skin contact:**
  Brush off loose particles from skin.
  Clean with water and soap.
  Seek medical treatment in case of complaints.
- **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; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed
May cause gastro-intestinal irritation if ingested.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
- **Suitable extinguishing agents:**
  The product is not flammable.
  Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** None.

5.2 Special hazards arising from the substance or mixture
No further relevant information available.

5.3 Advice for firefighters
- **Protective equipment:**
  Wear self-contained respiratory protective device.
  Wear fully protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid formation of dust.
Avoid breathing dust.
Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date: 25 October 2018
Revision: 25 October 2018

White Fused Aluminum Oxide

(Cont’d. from page 2)

Ensure adequate ventilation
Use personal protective equipment as required.

6.2 Environmental precautions No special measures required.
6.3 Methods and material for containment and cleaning up
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.

6.4 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Prevent formation of dust.
Any unavoidable deposit of dust must be regularly removed.
Use only in well ventilated areas.
Avoid breathing dust.

7.2 Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and receptacles:
Storage area should be dry and well-ventilated.
Information about storage in one common storage facility: Store away from foodstuffs.
Further information about storage conditions:
Protect from humidity and water.
This product is hygroscopic.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

1344-28-1 Aluminium oxide

<table>
<thead>
<tr>
<th>Source</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL (Canada)</td>
<td>Long-term value: 1,0 mg/m³ respirable, as Al</td>
</tr>
<tr>
<td>EV (Canada)</td>
<td>Long-term value: 10 mg/m³ total dust</td>
</tr>
<tr>
<td>WEL (Great Britain)</td>
<td>Long-term value: 10* 4** mg/m³ &quot;inhalable dust &quot;respirable dust</td>
</tr>
<tr>
<td>OEL (Ireland)</td>
<td>Long-term value: 10* 4** mg/m³ &quot;total inhalable &quot;respirable dust</td>
</tr>
<tr>
<td>PEL (USA)</td>
<td>Long-term value: 15*; 5** mg/m³ &quot;Total dust; &quot; Respirable fraction</td>
</tr>
<tr>
<td>REL (USA)</td>
<td>Long-term value: 10* 5** mg/m³</td>
</tr>
</tbody>
</table>

(Cont’d. on page 4)
White Fused Aluminum Oxide

(Cont’d. from page 3)

<table>
<thead>
<tr>
<th>TLV (USA)</th>
<th>as Al<strong>Total dust</strong>Respirable/pyro powd./welding f.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 1* mg/m³ as Al; *as respirable fraction</td>
</tr>
</tbody>
</table>

- **DNELs**: No further relevant information available.
- **PNECs**: No further relevant information available.

**8.2 Exposure controls**

- **General protective and hygienic measures**: The usual precautionary measures are to be adhered to when handling chemicals. 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. Avoid breathing dust.
- **Respiratory protection**: Wear appropriate NIOSH or EU approved respirator when ventilation is inadequate and occupational exposure limits are exceeded. For spills, respiratory protection may be advisable.
- **Protection of hands**: Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388. Gloves are advised for repeated or prolonged contact. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Eye protection**: Follow relevant national guidelines concerning the use of protective eyewear.
- **Body protection**: Not required under normal conditions of use. Protection may be required for spills.
- **Limitation and supervision of exposure into the environment**: No special requirements.
- **Risk management measures**: No special requirements.

**SECTION 9: Physical and chemical properties**

(Cont’d. on page 5)

- **9.1 Information on basic physical and chemical properties**
  - **Appearance**
    - Form: Granulate
    - Colour: White
  - **Odour**: Odourless
  - **Odour threshold**: Not determined.

- **pH-value**: Slightly alkaline
- **Melting point/freezing point**: 2040 °C (3704 °F)
- **Initial boiling point and boiling range**: Not determined.

- **Flash point**: Not applicable.
- **Flammability (solid, gas)**: Product is not flammable.
- **Auto/Self-ignition temperature**: Not determined.
Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

White Fused Aluminum Oxide

- Decomposition temperature: Not determined.
- Explosive properties: Product does not present an explosion hazard.
  - Explosion limits
    - Lower: Not determined.
    - Upper: Not determined.
  - Oxidising properties: Non-oxidising.
- Vapour pressure: Not applicable.
- Density:
  - Relative density: 3,97 g/cm³ (33,13 lbs/gal)
  - 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.

9.2 Other information
No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
  No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
  No decomposition if used and stored according to specifications.
- 10.3 Possibility of hazardous reactions
  Reacts with strong acids.
  Reacts with strong alkali.
  Reacts with strong oxidising agents.
- 10.4 Conditions to avoid
  Prevent formation of dust.
- 10.5 Incompatible materials
  No further relevant information available.
- 10.6 Hazardous decomposition products
  Under fire conditions only:
  Toxic metal oxide smoke

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity: Based on available data, the classification criteria are not met.
- LD/LC50 values relevant for classification: None.
Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

White Fused Aluminum Oxide

- Primary irritant effect
  - Skin corrosion/irritation: Based on available data, the classification criteria are not met.
  - Serious eye damage/irritation: Based on available data, the classification criteria are not met.
  - Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer):
    - Substance is not listed.
  - Probable routes of exposure:
    - Ingestion.
    - Eye contact.
    - Skin contact.
  - Repeated dose toxicity: Long term inhalation of product dust may be harmful.
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
  - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
  - STOT-single exposure: Based on available data, the classification criteria are not met.
  - STOT-repeated exposure: Based on available data, the classification criteria are not met.
  - Aspiration hazard: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- 12.1 Toxicity
  - Aquatic toxicity: Not hazardous for water.
- 12.2 Persistence and degradability
  - Inorganic product, is not eliminable from water by means of biological cleaning processes.
- 12.3 Bioaccumulative potential
  - Does not accumulate in organisms.
- 12.4 Mobility in soil
  - No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects
  - No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
  - Recommendation
    - Smaller quantities can be disposed of with household waste.
    - 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.
  - Uncleaned packaging:
    - Recommendation: Disposal must be made according to official regulations.
### SECTION 14: Transport information

| 14.1 UN-Number | DOT, ADR, IMDG, IATA | Not Regulated |
| 14.2 UN proper shipping name | DOT, ADR, IMDG, IATA | Not Regulated |
| 14.3 Transport hazard class(es) | DOT, ADR, IMDG, IATA | Class Not Regulated |
| 14.4 Packing group | DOT, ADR, IMDG, IATA | Not Regulated |
| 14.5 Environmental hazards: | Marine pollutant: | No |
| 14.6 Special precautions for user | Not applicable. |
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

### SECTION 15: Regulatory information

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

- **United States (USA)**
  - SARA
    - Section 302 (extremely hazardous substances):
      Substance is not listed.
    - Section 355 (extremely hazardous substances):
      Substance is not listed.
    - Section 313 (Specific toxic chemical listings):
      Substance is listed.
    - TSCA (Toxic Substances Control Act):
      Substance is listed.
  - Proposition 65 (California):
    - Chemicals known to cause cancer:
      Substance is not listed.
    - Chemicals known to cause developmental toxicity for females:
      Substance is not listed.
    - Chemicals known to cause developmental toxicity for males:
### Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA

**GHS**

**Trade name:** ALR – US, ALRST – US, ALRLD – US, ALRHD – US  
White Fused Aluminum Oxide

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<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td><strong>Substance is not listed.</strong></td>
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<tr>
<td>· <strong>Chemicals known to cause developmental toxicity:</strong></td>
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<td></td>
<td>Substance is not listed.</td>
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<tr>
<td>· <strong>EPA (Environmental Protection Agency)</strong></td>
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<tr>
<td></td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>· <strong>IARC (International Agency for Research on Cancer)</strong></td>
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<tr>
<td></td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td><strong>Canadian Domestic Substances List (DSL) (Substances not listed)</strong></td>
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<tr>
<td></td>
<td>Substance is listed.</td>
</tr>
<tr>
<td>· <strong>National regulations:</strong></td>
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<td></td>
<td>· <strong>Water hazard class:</strong> Generally not hazardous for water.</td>
</tr>
<tr>
<td></td>
<td>· <strong>Other regulations, limitations and prohibitive regulations</strong></td>
</tr>
<tr>
<td><strong>Substances of very high concern (SVHC) according to REACH, Article 57</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>· <strong>15.2 Chemical safety assessment:</strong> A Chemical Safety Assessment has not been carried out.</td>
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</tr>
</tbody>
</table>

### SECTION 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.

**Abbreviations and acronyms:**

ADR: 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  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistant, Bio-accumulable, Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative

**Sources**

Website, European Chemicals Agency (echa.europa.eu)  
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)  
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)  
Safety Data Sheets, Individual Manufacturers  
SDS Prepared by:  
ChemTel Inc.  
1305 North Florida Avenue

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