

Safety Data Sheet



Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • Levigated Alumina / SDS# 9104895
Product Code • 40-6435-016, 40-6435-080

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

Relevant identified use(s) • Polishing Compound

1.3 Details of the supplier of the safety data sheet

Manufacturer • BUEHLER, a division of Illinois Tool Works Inc.
 41 Waukegan Road
 Lake Bluff, IL 60044
 United States
<https://www.buehler.com>
Telephone (Technical) • 847-295-6500

1.4 Emergency telephone number

Manufacturer • 800-424-9300 - CHEMTREC

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
 According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Specific Target Organ Toxicity Repeated Exposure 2 - H373
DSD/DPD • Harmful (Xn)
 R48/20

2.2 Label Elements

CLP

WARNING



Hazard statements • H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention • P260 - Do not breathe dust.

Response • P314 - Get medical advice/attention if you feel unwell.

Storage/Disposal • P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



Risk phrases • R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD • According to European Directive 1999/45/EC this material is considered dangerous.

UN GHS

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2.1 Classification of the substance or mixture

UN GHS • Specific Target Organ Toxicity Repeated Exposure 2

2.2 Label elements

UN GHS

WARNING



Hazard statements • May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention • Do not breathe dust.

Response • Get medical advice/attention if you feel unwell.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

UN GHS • According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 2

2.2 Label elements

OSHA HCS 2012

WARNING



Hazard statements • May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention • Do not breathe dust.

Response • Get medical advice/attention if you feel unwell.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Other Toxic Effects - D2B

2.2 Label elements

WHMIS



- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

| Composition | | | | | |
|----------------|--------------------------------------|----------------|---|--|----------|
| Chemical Name | Identifiers | % | LD50/LC50 | Classifications According to Regulation/Directive | Comments |
| Aluminum oxide | CAS:1344-28-1 EC Number:215-691-6 | 70% TO 100% | Inhalation-Rat LC50 • 0.2 mg/L 5 Hour(s) 28 Week(s) | UN GHS: STOT RE 2 (Lungs, Inhl); EU DSD/DPD: Xn, R48/20; EU CLP: STOT RE 2, H373 (Lungs, Inhl); OSHA HCS 2012: STOT RE 2 (Lungs, Inhl); | NDA |

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation**
- Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. If signs/symptoms continue, get medical attention.
- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. If irritation develops and persists, get medical attention.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Do NOT induce vomiting. Give victim a glass of water or milk. Never give anything by mouth to an unconscious person. Obtain medical attention immediately if ingested.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- In case of fire use media as appropriate for surrounding fire.

- Unsuitable Extinguishing Media**
- No data available.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- None known.

- Hazardous Combustion Products**
- No data available.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

- Emergency Procedures**
- As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. Keep unauthorized personnel away.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Avoid generating dust.
SMALL DRY SPILLS: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.
LARGE SPILLS: Cover powder spill with plastic sheet or tarp to minimize spreading.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool, dry, well-ventilated place. Do not store above 24°C (75.2°F).

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

| Exposure Limits/Guidelines | | | |
|-------------------------------|--------|---|--|
| | Result | ACGIH | OSHA |
| Aluminum oxide (1344-28-1) | TWAs | 1 mg/m ³ TWA (respirable fraction) <i>as Aluminum insoluble compounds</i> | 15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction) |

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment).

Personal Protective Equipment

Respiratory

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

| Material Description | | | |
|-------------------------------------|-------------------------|------------------------------|----------------------------|
| Physical Form | Solid | Appearance/Description | White powder with no odor. |
| Color | White | Odor | None |
| Odor Threshold | Data lacking | | |
| General Properties | | | |
| Boiling Point | Data lacking | Melting Point/Freezing Point | Data lacking |
| Decomposition Temperature | Data lacking | pH | Data lacking |
| Specific Gravity/Relative Density | = 3.8425 Water=1 | Water Solubility | Insoluble |
| Viscosity | Data lacking | Explosive Properties | Data lacking |
| Oxidizing Properties: | Data lacking | | |
| Volatility | | | |
| Vapor Pressure | Data lacking | Vapor Density | < 1 Air=1 |
| Evaporation Rate | < 1 n-Butyl Acetate = 1 | | |
| Flammability | | | |
| Flash Point | Data lacking | UEL | Data lacking |
| LEL | Data lacking | Autoignition | Data lacking |
| Flammability (solid, gas) | Data lacking | | |
| Environmental | | | |
| Octanol/Water Partition coefficient | Data lacking | | |

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization not indicated.

10.4 Conditions to avoid

- Avoid generating dust.

10.5 Incompatible materials

- Reactive with oxidizing agents, acids. Chlorine Trifluoride reacts violently with Aluminum Oxide producing a flame. Ethylene oxide may polymerize violently when in contact with highly catalytic surfaces such as pure Aluminum Oxide. Reacts with hot chlorinated rubber.

10.6 Hazardous decomposition products

- No data available.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

| Components | | |
|------------------------------|-----------|--|
| Aluminum oxide (70% TO 100%) | 1344-28-1 | Multi-dose Toxicity: Inhalation-Rat TClO • 200 mg/m ³ 5 Hour(s) 28 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration:Chronic pulmonary edema; Related to Chronic Data:Death in the Other Multiple Dose data type field;</i> Tumorigen / Carcinogen: Implant-Rat • 200 mg/kg; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria; Tumorigenic:Tumors at site of application;</i> Implant-Rat TDLo • 200 mg/kg; <i>Tumorigenic:Neoplastic by RTECS criteria; Tumorigenic:Tumors at site of application;</i> Intrapleural-Rat TDLo • 90 mg/kg; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</i> |

| GHS Properties | Classification |
|-------------------------------|--|
| Respiratory sensitization | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Serious eye damage/Irritation | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Acute toxicity | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Aspiration Hazard | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Carcinogenicity | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Skin corrosion/Irritation | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Skin sensitization | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| STOT-RE | EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 2 UN GHS • Specific Target Organ Toxicity Repeated Exposure 2 |
| STOT-SE | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Toxicity for Reproduction | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |
| Germ Cell Mutagenicity | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking |

Potential Health Effects

Inhalation

Acute (Immediate)

- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

- Chronic (Delayed)**
- Repeated and prolonged exposure to dust may cause lung effects including pneumoconiosis.

Skin

- Acute (Immediate)**
- Exposure to dust may cause mechanical irritation.

- Chronic (Delayed)**
- No data available.

Eye

- Acute (Immediate)**
- Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

- Chronic (Delayed)**
- No data available.

Ingestion

- Acute (Immediate)**
- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

- Chronic (Delayed)**
- No data available.

Key to abbreviations

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information**12.1 Toxicity**

- Material data lacking.

12.2 Persistence and degradability

- The product itself and its products of degradation are not toxic. Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations**13.1 Waste treatment methods**

- Product waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

- Packaging waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

| | 14.1 UN number | 14.2 UN proper shipping name | 14.3 Transport hazard class(es) | 14.4 Packing group | 14.5 Environmental hazards |
|-----------|----------------|------------------------------|---------------------------------|--------------------|----------------------------|
| DOT | NDA | Not Regulated | NDA | NDA | NDA |
| TDG | NDA | Not Regulated | NDA | NDA | NDA |
| IATA/ICAO | NDA | Not Regulated | NDA | NDA | NDA |

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Data lacking.

Section 15 - Regulatory Information

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

SARA Hazard Classifications • Chronic

| Inventory | | | | | | |
|----------------|-----------|------------|-------------|-----------|-----------|------|
| Component | CAS | Canada DSL | Canada NDSL | EU EINECS | EU ELNICS | TSCA |
| Aluminum oxide | 1344-28-1 | Yes | No | Yes | No | Yes |

Canada

Labor

Canada - WHMIS - Classifications of Substances

| | | |
|------------------|-----------|---|
| • Aluminum oxide | 1344-28-1 | Uncontrolled product according to WHMIS classification criteria |
|------------------|-----------|---|

Canada - WHMIS - Ingredient Disclosure List

| | | |
|------------------|-----------|-----|
| • Aluminum oxide | 1344-28-1 | 1 % |
|------------------|-----------|-----|

Environment

Canada - CEPA - Priority Substances List

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - OSHA - Specifically Regulated Chemicals

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

| | | |
|------------------|-----------|--|
| • Aluminum oxide | 1344-28-1 | 1.0 % de minimis concentration (fibrous forms) |
|------------------|-----------|--|

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - California - Proposition 65 - Developmental Toxicity

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

| | | |
|------------------|-----------|------------|
| • Aluminum oxide | 1344-28-1 | Not Listed |
|------------------|-----------|------------|

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Revision Date**

- 28/October/2015

Preparation Date

- 03/April/2012

Disclaimer/Statement of Liability

- To the best of our knowledge, the information contained in this SDS is accurate or is obtained from sources believed to be accurate. However, no liability, expressed or implied, is assumed for the accuracy or completeness of the information contained herein. Buyer assumes liability in its use of the material.

Key to abbreviations

NDA = No data available