

Centre Anti-Poison pour le Québec: (800) 463-5060 Tél. (Qc): (418) 660-8666 / 800-890-8666 Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

| Product Identifier | | | Product Use | | |
|--|---------------------------------------|-----------------------------|---|-------------------------------|--------------|
| ALUMINIUM OXIDE | | | Laboratory use | | |
| Chemical formula | | | | Product code | Molar weight |
| Al ₂ O ₃ | | | | AR-0115 101,96 | |
| Chemical name / Commercial name / Synonymous ALUMINUM OXIDE, ALUMINE, ALUMINA, SESQUIOXYDE D'ALU | | | JMINIUM, DIALUMIN | UM TRIOXIDE, ALUNDUM MORIN DY | 'ED |
| Supplier's name | | | Address-Street | | |
| Laboratoire MAT | | | 610, Adanac Street | | |
| City | | Province | | | |
| Québec | | Québec | | | |
| Postal code | ostal code Internet | | Phone number | | |
| G1C 7B7 www.labmat.com | | 418-660-8666 / 800-890-8666 | | | |
| Emergency phone | Emergency phone CANUTEC: 613-996-6666 | | CENTRE ANTI-POISON DU QUÉBEC 800-463-5060 | | |
| Date SDS SDS Prepared | | SDS Prepared by | • | E-Mail | |
| 9/30/2019 Laboratoire <i>N</i> | | Laboratoire MA | Δ Τ | labmat@labmat.com | |

SECTION 02 - HAZARDS IDENTIFICATION

| Classification WHIMS / GHS | Not a hazardous substance according to WHMIS 2015 | |
|----------------------------|---|---|
| Other dangers | | NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme) |
| | Health Fire Reactivity Special danger | |

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingrédients (Dénomination chimique / synonymes) | Numéro CAS et tout identificateur unique | Concentration (%) |
|---|--|-------------------|
| Oxyde d'aluminium | 1344-28-1 | <=100 |

SECTION 04 - FIRST AID MEASURES

| Eye contact | Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention. |
|---|--|
| Skin contact | Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention. |
| Inhalation | Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician. |
| Ingestion | If the person is conscious, rinse the mouth with water. Never give anything by mouth to an unconscious person. Consult a physician. |
| Most important symptoms and effects (acute and delayed) | Ref. section 11. |
| Immediate medical attention and special treatment, if necessary | In case of medical consultation, keep this sheet available. |
| General advice | Show this safety data sheet to the doctor in attendance. |

SECTION 05 - FIREFIGHTING MEASURES

| Flammability | No |
|---|---|
| Ignition conditions | Non flammable. |
| Suitable extinguishing media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable extinguishing media | Do not use halon fire extinguishers. |
| Hazardous combustion / decomposition products | Hazardous decomposition products formed under fire conditions. Aluminium oxides. |
| hazards | May react violently with incompatible products (Ref Section 10). Aluminum oxide heated above 200 ° C in the presence of halocarbon vapors may lead to an exothermic reaction accompanied by toxic vapors of hydrochloric acid and carbon oxychloride. |
| Special protective equipment and precautions for firefighters | Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus. |

SECTION 06 - ACCIDENTAL RELEASE MEASURES

| Methods and materials for | Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Pick |
|-----------------------------------|---|
| containment and cleaning up / | up with a shovel or broom, taking care not to scatter dust. Dispose of residues in a container provided for |
| Personnal precautions, protective | the disposal of hazardous materials. Do not let product enter drains. |
| equipment | |

SECTION 07 - HANDLING AND STORAGE

| | Keep container tightly closed and store away from heat, moisture, and incompatible products. Store in a cool, dry place. Store in a well-ventilated area. Strongly hygroscopic |
|---------------------|--|
| Methods of handling | Provide appropriate exhaust ventilation at places where dust is formed. Avoid dust formation. |

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

| Components | CAS- No. | | Control parameters | Basis |
|--------------------|---|------|--------------------|---|
| ALUMINIUM OXIDE | 1344- 28-1 | TWA | 10 mg/m3 | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| | | VEMP | | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| Remark | The standard corresponds to dust containing no asbestos and whose percentage of crystalline silica is less than 1%. | | | |
| | | TWA | 1 mg/m3 | Canada. British Columbia OEL |

| Data source | Sigma-Aldrich. |
|---------------------|--|
| Ventilation | Use fan. |
| Respiratory | If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply. |
| Gloves | Handle with gloves. |
| Eyes | Safety goggles with safety shutters. |
| Shoes | Use safety shoes. |
| Clothing | Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| Engineering control | Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values. |

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

| Physical state | Solid. |
|---------------------------------------|-----------------------------|
| Appearance | Poudre cristalline blanche. |
| Odour | inodore. |
| Odour threshold | Data not available |
| рН | Donnée non disponible |
| Melting point / Freezing point | 2040°C |
| Initial boiling point | 2980°C |
| Boiling range | Data not available |
| Flash point | Data not available |
| Evaporation rate | Data not available |
| Flammability | No |
| Lower flammable / Explosive limit | Data not available |
| Upper flammable / Explosive limit | Data not available |
| Vapour pressure | 1.0 mmHg @ 2158°C. |
| Vapour density | Data not available |
| Relative density | $4.00 \mathrm{g/cm^3}$ |
| Solubility | Insoluble dans l'eau. |
| Partition coefficient water/n-octanol | Data not available |
| Auto-ignition temperature | Data not available |
| Decomposition temperature | Data not available |
| Viscosity | Data not available |

SECTION 10 - STABILITY AND REACTIVITY

| Reactivity | Non-reactive under normal conditions. | |
|---|--|--|
| Chemical stability | Stable under recommended storage conditions. Hygroscopic. | |
| Possibility of hazardous reactions | Stable under normal conditions. | |
| Conditions of instability (Including sensitivity to shock / static discharge / vibration) | Avoid moisture. | |
| Incompatible material | Strong acids and bases, chlorine trifluoride, ethylene oxide, halocarbons, oxygen difluoride, sodium nitrate, vinyl acetate and moisture. Halogens. Strong oxidizing agents. | |
| Hazardous decomposition products | Hazardous decomposition products formed under fire conditions. Aluminium oxides. | |

SECTION 11 - TOXICOLOGICAL INFORMATION

ALUMINIUM OXIDE

| Routes of exposure | Ingestion, inhalation, skin and eyes. |
|---|--|
| Acute exposition effects / symptoms: | By exposure route below. |
| - Eyes | Irritation. |
| - Skin | Irritation. |
| - Inhalation | Irritation of the mucous membranes and respiratory tract. Pain in the chest, cough, dyspnea, headache, dizziness, nausea and vomiting. |
| Acute toxicity (Ingestion) | Irritation of the mucous membranes. Gastrointestinal disorders, cramps, diarrhea, headache, dizziness, salivation, convulsions, nausea and vomiting. |
| Chronic exposure effects / symptoms | Burning sensation, nervous disorders, chest pain, cough, dyspnoea, laryngitis, headache, dizziness, confusion, irritability, tiredness, nausea and vomiting. NOTE: Chronic inhalation of fine particles may cause lung disorders (Shaver's Disease). Aluminosis is the appearance of peripheral emphysema with preponderance for the upper lobes and frequent microhemorrhages that can cause pneumothorax. It should be noted, however, that workers exposed to aluminum often have concomitant exposure to other products that may have lung effects such as hydrogen fluoride, fluorine, sulfur dioxide and ozone. In addition, lubricating oils sometimes mixed with aluminum powders may play a role in the development of this fibrosis. |
| DL50 (specify species and route of entry) | LD50 Oral - Rat - Male et female - >10 000 mg/kg LD50 Dermal - Data not available. |
| CL50 (specify species and route of entry) | CL50 inhalation - Rat Male et female - >2.3 mg/L - 4 h. |

SECTION 12 - ECOLOGICAL INFORMATION

| Available ecological information No | |
|-------------------------------------|--|
|-------------------------------------|--|

SECTION 13 - DISPOSAL CONSIDERATIONS

| | Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company. |
|------------------------|--|
| Contaminated Packaging | Dispose of as unused product. |

SECTION 14 - TRANSPORT INFORMATION

| UN Number | N/R |
|----------------------------|-----|
| UN Proper shipping name | |
| Transport hazard class(es) | |
| Packing group | |
| Limited quantity index | |
| ERAP Index | |
| Special precautions | |

SECTION 15 - REGULATORY INFORMATION

| WHIMS CANADA | Not a hazardous substance according to WHMIS 2015 |
|--------------|---|
| | Not a hazardous substance according to WHMIS 2015 |

SECTION 16 - OTHER INFORMATION

Further information

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Last Update: 9/30/2019