

Creation Date 25-Oct-2010

Revision Date 08-Feb-2024

Revision Number 4

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

|                           |                        |
|---------------------------|------------------------|
| Product Description:      | <u>Aluminum powder</u> |
| Cat No. :                 | <b>41000</b>           |
| Index No                  | 013-001-00-6           |
| CAS No                    | 7429-90-5              |
| EC No                     | 231-072-3              |
| Molecular Formula         | Al                     |
| REACH registration number | -                      |

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

|                      |                          |
|----------------------|--------------------------|
| Recommended Use      | Laboratory chemicals.    |
| Uses advised against | No Information available |

### 1.3. Details of the supplier of the safety data sheet

#### Company

Thermo Fisher (Kandel) GmbH  
Erlenbachweg 2, 76870 Kandel, Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300

**Swiss distributor** - Fisher Scientific AG  
Neuhofstrasse 11, CH 4153 Reinach  
Tel: +41 (0) 56 618 41 11  
<https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html>

E-mail address begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:  
Tox Info Suisse Emergency Number: **145 (24hr)**  
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)  
Chemtrec (24h) Toll-Free: 0800 564 402  
Chemtrec Local: +41-43 508 20 11 (Zurich)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

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## CLP Classification - Regulation (EC) No 1272/2008

### Physical hazards

Substances/mixtures which, in contact with water, emit flammable gases  
Pyrophoric solids

Category 2 (H261)

Category 1 (H250)

### Health hazards

Based on available data, the classification criteria are not met

### Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

### Hazard Statements

H250 - Catches fire spontaneously if exposed to air

H261 - In contact with water releases flammable gases

May form combustible dust concentrations in air

### Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P231 + P232 - Handle and store contents under inert gas. Protect from moisture

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

P302 + P335 + P334 - IF ON SKIN: Brush off loose particles from skin. Immerse in cool water

## 2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment

May form explosible dust-air mixture if dispersed

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| Component | CAS No    | EC No             | Weight % | CLP Classification - Regulation (EC) No 1272/2008 |
|-----------|-----------|-------------------|----------|---|
| Aluminum  | 7429-90-5 | EEC No. 231-072-3 | <=100    | Pyr. Sol. 1 (H250)<br>Water-react. 2 (H261)       |

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-

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|   |  |
|---|--|
| <b>General Advice</b>                     | If symptoms persist, call a physician.   |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.                                  |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.                                |
| <b>Ingestion</b>                          | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.  |
| <b>Inhalation</b>                         | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.                                     |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |

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

None reasonably foreseeable.

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

|                           |                        |
|---------------------------|------------------------|
| <b>Notes to Physician</b> | Treat symptomatically. |
|---------------------------|------------------------|

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

Dry sand; dry clay; Limestone powder; approved class D extinguishers.

#### Extinguishing media which must not be used for safety reasons

Water.

### 5.2. Special hazards arising from the substance or mixture

Water reactive. Contact with water liberates extremely flammable gases. Spontaneously flammable in air. Fine dust dispersed in air may ignite. Dust can form an explosive mixture with air. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Hydrogen, Fumes of aluminum or aluminum oxide.

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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## 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Avoid dust formation. Ensure adequate ventilation.

## 6.2. Environmental precautions

Should not be released into the environment.

## 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

## 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Avoid dust formation. Avoid ingestion and inhalation. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Store under an inert atmosphere. Keep away from water or moist air.

**Technical Rules for Hazardous Substances (TRGS) 510**  
**Storage Class (LGK) (Germany)**

Storage Class/LGK 4.2

**Switzerland - Storage of hazardous substances**

Storage class - SC 4.2  
<https://www.kvu.ch/de/themen/stoffe-und-produkte>  
<https://www.kvu.ch/fr/themes/substances-et-produits>  
<https://www.kvu.ch/it/temi/sostanze-e-prodotti>

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

| Component | European Union | The United Kingdom  | France  | Belgium                         | Spain  |
|-----------|----------------|---|---|---------------------------------|--|
| Aluminum  |                | STEL: 30 mg/m <sup>3</sup> 15 min<br>STEL: 12 mg/m <sup>3</sup> 15 min<br>TWA: 10 mg/m <sup>3</sup> 8 hr<br>TWA: 4 mg/m <sup>3</sup> 8 hr | TWA / VME: 10 mg/m <sup>3</sup><br>(8 heures). metal<br>TWA / VME: 5 mg/m <sup>3</sup> (8<br>heures). | TWA: 1 mg/m <sup>3</sup> 8 uren | TWA / VLA-ED: 1 mg/m <sup>3</sup><br>(8 horas) |

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| Component | Italy | Germany  | Portugal                         | The Netherlands | Finland |
|-----------|-------|--|----------------------------------|-----------------|---------|
| Aluminum  |       | TWA: 1.25 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2<br>TWA: 10 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2<br>TWA: 4 mg/m <sup>3</sup> (8 Stunden). MAK<br>TWA: 1.5 mg/m <sup>3</sup> (8 Stunden). MAK | TWA: 1 mg/m <sup>3</sup> 8 horas |                 |         |

| Component | Austria  | Denmark   | Switzerland   | Poland   | Norway  |
|-----------|--|---|---|--|---|
| Aluminum  | MAK-KZGW: 20 mg/m <sup>3</sup> 15 Minuten<br>MAK-TMW: 10 mg/m <sup>3</sup> 8 Stunden | TWA: 5 mg/m <sup>3</sup> 8 timer<br>TWA: 2 mg/m <sup>3</sup> 8 timer<br>STEL: 10 mg/m <sup>3</sup> 15 minutter<br>STEL: 4 mg/m <sup>3</sup> 15 minutter | TWA: 3 mg/m <sup>3</sup> 8 Stunden<br>TWA: 10 mg/m <sup>3</sup> 8 Stunden | TWA: 2.5 mg/m <sup>3</sup> 8 godzinach<br>TWA: 1.2 mg/m <sup>3</sup> 8 godzinach | TWA: 5 mg/m <sup>3</sup> 8 timer<br>STEL: 10 mg/m <sup>3</sup> 15 minutter.<br>pyrotechnical; value calculated powder |

| Component | Bulgaria  | Croatia   | Ireland  | Cyprus | Czech Republic                               |
|-----------|---|---|--|--------|--|
| Aluminum  | TWA: 10.0 mg/m <sup>3</sup><br>TWA: 1.5 mg/m <sup>3</sup> | TWA-GVI: 10 mg/m <sup>3</sup> 8 satima. total dust, inhalable particles<br>TWA-GVI: 4 mg/m <sup>3</sup> 8 satima. respirable dust | TWA: 1 mg/m <sup>3</sup> 8 hr. respirable fraction<br>STEL: 3 mg/m <sup>3</sup> 15 min |        | TWA: 10.0 mg/m <sup>3</sup> 8 hodinách. dust |

| Component | Estonia  | Gibraltar | Greece  | Hungary                               | Iceland   |
|-----------|--|-----------|---|---------------------------------------|---|
| Aluminum  | TWA: 10 mg/m <sup>3</sup> 8 tundides. total dust<br>TWA: 4 mg/m <sup>3</sup> 8 tundides. respirable dust |           | TWA: 10 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup> 8 órában. AK | STEL: 10 mg/m <sup>3</sup> dust and powder<br>TWA: 5 mg/m <sup>3</sup> 8 klukkustundum. dust and powder |

| Component | Latvia                   | Lithuania  | Luxembourg | Malta | Romania   |
|-----------|--------------------------|--|------------|-------|---|
| Aluminum  | TWA: 2 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup> inhalable fraction IPRD<br>TWA: 2 mg/m <sup>3</sup> respirable fraction IPRD<br>TWA: 1 mg/m <sup>3</sup> IPRD |            |       | TWA: 3 mg/m <sup>3</sup> 8 ore<br>TWA: 1 mg/m <sup>3</sup> 8 ore<br>STEL: 10 mg/m <sup>3</sup> 15 minute<br>STEL: 3 mg/m <sup>3</sup> 15 minute |

| Component | Russia  | Slovak Republic   | Slovenia | Sweden   | Turkey |
|-----------|---|---|----------|--|--------|
| Aluminum  | TWA: 2 mg/m <sup>3</sup> 0036<br>MAC: 6 mg/m <sup>3</sup> | TWA: 4 mg/m <sup>3</sup> inhalable dust<br>TWA: 1.5 mg/m <sup>3</sup> respirable dust |          | TLV: 5 mg/m <sup>3</sup> 8 timmar. NGV<br>TLV: 2 mg/m <sup>3</sup> 8 timmar. NGV |        |

## Biological limit values

List source(s):

| Component | European Union | United Kingdom | France | Spain | Germany   |
|-----------|----------------|----------------|--------|-------|---|
| Aluminum  |                |                |        |       | Aluminum: 50 µg/g Creatinine urine (for long-term exposures: at the end of the shift after several shifts ) |

| Component | Italy | Finland | Denmark | Bulgaria | Romania                               |
|-----------|-------|---------|---------|----------|---------------------------------------|
| Aluminum  |       |         |         |          | Aluminum: 200 µg/L urine end of shift |

| Component | Gibraltar | Latvia | Slovak Republic                                 | Luxembourg | Turkey |
|-----------|-----------|--------|---|------------|--------|
| Aluminum  |           |        | Aluminum: 60 µg/g creatinine urine not critical |            |        |

## Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of

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exposure to chemical and biological agents.  
MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

## Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

## Predicted No Effect Concentration (PNEC)

See values below.

| Component                      | Fresh water | Fresh water sediment | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture) |
|--------------------------------|-------------|----------------------|--------------------|------------------------------------|--------------------|
| Aluminum<br>7429-90-5 ( ≤100 ) |             |                      |                    | PNEC = 20mg/L                      |                    |

## 8.2. Exposure controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Goggles (European standard - EN 166)

#### Hand Protection

Protective gloves

| Glove material                                      | Breakthrough time                 | Glove thickness | EU standard | Glove comments        |
|---|-----------------------------------|-----------------|-------------|-----------------------|
| Natural rubber<br>Nitrile rubber<br>Neoprene<br>PVC | See manufacturers recommendations | -               | EN 374      | (minimum requirement) |

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

#### Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Particulates filter conforming to EN 143

#### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Particle filtering: EN149:2001  
When RPE is used a face piece Fit Test should be conducted

#### Environmental exposure controls

No information available.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|   |                          |                                   |
|---|--------------------------|-----------------------------------|
| Physical State                          | Powder Solid             |                                   |
| Appearance                              | Grey                     |                                   |
| Odor                                    | Odorless                 |                                   |
| Odor Threshold                          | No data available        |                                   |
| Melting Point/Range                     | 660 °C / 1220 °F         |                                   |
| Softening Point                         | No data available        |                                   |
| Boiling Point/Range                     | 2327 °C / 4220.6 °F      | @ 760 mmHg                        |
| Flammability (liquid)                   | Not applicable           | Solid                             |
| Flammability (solid,gas)                | No information available |                                   |
| Explosion Limits                        | No data available        |                                   |
| Flash Point                             | No information available | Method - No information available |
| Autoignition Temperature                | 400 °C / 752 °F          |                                   |
| Decomposition Temperature               | No data available        |                                   |
| pH                                      | Not applicable           |                                   |
| Viscosity                               | Not applicable           | Solid                             |
| Water Solubility                        | Insoluble                |                                   |
| Solubility in other solvents            | No information available |                                   |
| Partition Coefficient (n-octanol/water) |                          |                                   |
| Vapor Pressure                          | No data available        |                                   |
| Density / Specific Gravity              | 2.7020                   |                                   |
| Bulk Density                            | No data available        |                                   |
| Vapor Density                           | Not applicable           | Solid                             |
| Particle characteristics                | No data available        |                                   |

### 9.2. Other information

|  |                                   |
|--|-----------------------------------|
| Molecular Formula  | Al                                |
| Molecular Weight   | 26.98                             |
| Substances/mixtures which, in contact with water, emit flammable gases | Emitted gas ignites spontaneously |
| Evaporation Rate   | Not applicable - Solid            |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Yes

### 10.2. Chemical stability

Water reactive. Moisture sensitive. Air sensitive. Pyrophoric: Spontaneously flammable in air.

### 10.3. Possibility of hazardous reactions

|                          |  |
|--------------------------|--|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions      | None under normal processing.            |

### 10.4. Conditions to avoid

Avoid dust formation. Incompatible products. Exposure to air. Exposure to moist air or water. Excess heat.

### 10.5. Incompatible materials

Water. Strong acids. Strong bases. Alcohols. Halogens. Halogenated compounds. Carbon dioxide (CO<sub>2</sub>).

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## 10.6. Hazardous decomposition products

Hydrogen. Fumes of aluminum or aluminum oxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Product Information** No acute toxicity information is available for this product

**(a) acute toxicity;**

**Oral** No data available  
**Dermal** No data available  
**Inhalation** No data available

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation               |
|-----------|-----------|-------------|-------------------------------|
| Aluminum  | -         | -           | LC50 > 0.888 mg/L ( Rat ) 4 h |

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**

**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** None known.

**(j) aspiration hazard;** Not applicable  
Solid

**Symptoms / effects, both acute and delayed** No information available.

### 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION



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## 12.1. Toxicity

Ecotoxicity effects

.

## 12.2. Persistence and degradability

Persistence

Insoluble in water.

Degradability

Not relevant for inorganic substances.

## 12.3. Bioaccumulative potential

May have some potential to bioaccumulate

## 12.4. Mobility in soil

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility.

## 12.5. Results of PBT and vPvB assessment

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment.

## 12.6. Endocrine disrupting properties

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

## 12.7. Other adverse effects

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

Switzerland - Waste Ordinance

Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600  
<https://www.fedlex.admin.ch/eli/cc/2015/891/en>

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

14.1. UN number

UN1396

14.2. UN proper shipping name

ALUMINIUM POWDER, UNCOATED

14.3. Transport hazard class(es)

4.3

14.4. Packing group

II

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## ADR

**14.1. UN number** UN1396  
**14.2. UN proper shipping name** ALUMINIUM POWDER, UNCOATED  
**14.3. Transport hazard class(es)** 4.3  
**14.4. Packing group** II

## IATA

**14.1. UN number** UN1396  
**14.2. UN proper shipping name** ALUMINIUM POWDER, UNCOATED  
**14.3. Transport hazard class(es)** 4.3  
**14.4. Packing group** II

**14.5. Environmental hazards** No hazards identified  
**14.6. Special precautions for user** No special precautions required.  
**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS), Taiwan (TCSI), Japan (ISHL), New Zealand (NZIoC), Japan (ISHL). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No    | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|-----------|-----------|-----------|--------|-----|-------|------|----------|------|------|
| Aluminum  | 7429-90-5 | 231-072-3 | -      | -   | X     | X    | KE-00881 | X    | -    |

| Component | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|-----------|-----------|------|---|-----|------|------|-------|-------|
| Aluminum  | 7429-90-5 | X    | ACTIVE  | X   | -    | X    | X     | X     |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### Authorisation/Restrictions according to EU REACH

| Component | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-----------|-----------|---|---|---|
| Aluminum  | 7429-90-5 | -   | Use restricted. See item 75. (see link for restriction details)               | -   |

#### REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

### Seveso III Directive (2012/18/EC)

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|-----------|--------|---|--|
|-----------|--------|---|--|

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|          |           |                |                |
|----------|-----------|----------------|----------------|
| Aluminum | 7429-90-5 | Not applicable | Not applicable |
|----------|-----------|----------------|----------------|

**Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals**

Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

See table for values

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|-----------|---------------------------------------|-------------------------|
| Aluminum  | nwg                                   |                         |

| Component | France - INRS (Tables of occupational diseases)   |
|-----------|---|
| Aluminum  | Tableaux des maladies professionnelles (TMP) - RG 32<br>Tableaux des maladies professionnelles (TMP) - RG 16,RG 16bis |

## Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H250 - Catches fire spontaneously if exposed to air

H261 - In contact with water releases flammable gases

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

# SAFETY DATA SHEET

Aluminum powder

Revision Date 08-Feb-2024

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (volatile organic compound)

## Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

## Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

## Prepared By

Health, Safety and Environmental Department

## Creation Date

25-Oct-2010

## Revision Date

08-Feb-2024

## Revision Summary

New emergency telephone response service provider.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .**

**For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).**

## Disclaimer

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**End of Safety Data Sheet**