

# SAFETY DATA SHEET

in accordance with Regulation (EC) no. 1907/2006 (REACH)



# MIXTURE OF ALUMINIUM OXIDE POWDER - SILVER

Date of Issue: 22-08-2022

Date of Revision:

Powder Number: LPP.K-47

Version: 2.0

## SECTION 1: Identification of The Substance or Mixture and The Company/Undertaking

### 1.1. Product identification

Product type:	Mixture
Product code:	LPP.K-47

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

#### 1.2.1. Relevant identified uses

Specific industrial/professional use:	Industrial For professional use only
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#### 1.2.2. Uses advised against

No additional information available.

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

Titomic Limited  
[info@titomic.com](mailto:info@titomic.com)  
[www.titomic.com](http://www.titomic.com)

### 1.4. Emergency telephone number

Country	Organisation / Company	Address	Emergency tel. number
THE NETHERLANDS	<b>National Poisons Information Center (NVIC)</b> University Medical Centre (UMC) Utrecht, The National Poisons Information Centre (NVIC) provides information for doctors, veterinary surgeons, pharmacists and other medical professionals about the potential health effects and treatment options in cases of poisoning. The NVIC can be reached 24 hours a day, both by telephone and Internet.	P.O. Box 85500 3508 GA Utrecht	+31 30 274 88 88

## SECTION 2: Hazard Identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) no. 1272/2008 [CLP]

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

For total text of H phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

N; R50/53

For total text of R phrases: see section 16

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## Harmful physical-chemical, health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) no. 1272/2008 [CLP]

Hazard pictograms (CLP):	 GHS09
Signal word (CLP):	Warning
Hazard indication (CLP):	H410 - Highly poisonous to aquatic organisms, with long-term consequences
Safety recommendations (CLP):	P260 - Do not inhale the dust P273 - Avoid discharge into the environment P391 - Clean up leaked or spilled substances P501 - Dispose of content/packaging at a recognised waste disposal centre

## 2.3. Other hazards

Other hazards not included in the classification:

Can form flammable/explosive vapour-air mixtures.

## SECTION 3: Composition of And Information About Ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixture

Name	Product identification	%	Classification as laid down in Directive 67/548/EEC
Silver powder (99% pure)	(CAS no.) 7440-22-4 (EC no.) 231-159-6	20	N; R50/53
Aluminium oxide powder (99.4% pure)	(CAS no.) 1344-28-1 (EC no.) 215-691-6 (REACH no.) 01-2119529248-35	80	Not classified

Name	Product identification	%	Classification according to Regulation (EC) no. 1272/2008 [CLP]
Silver powder (99% pure)	(CAS no.) 7440-22-4 (EC no.) 231-159-6 (REACH no.) 01-2119480154-42	20	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Aluminium oxide powder (99.4% pure)	(CAS no.) 1344-28-1 (EC no.) 215-691-6	80	Not classified

For total content of R and H phrases: see section 16

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## SECTION 4: First Aid Measures

### 4.1. Description of first aid measures

General first aid:	Never give anything by mouth to an unconscious person. If a person feels unwell, consult a physician (show the relevant label if possible).
First aid following substance inhalation:	Allow victim to breathe fresh air. Allow victim to rest.
First aid following contact with skin:	Remove soiled clothing and wash or shower skin with plenty of water (for 15 minutes). Consult a physician if necessary. Brush loose particles from skin. Bathe in plenty of water/apply wet bandage. If irritation persists, consult a physician.
First aid following contact with eyes:	If unsure what to do or if symptoms persist, consult a physician. Rinse with lukewarm water for 15 minutes. Lift eyelids using fingers and flush the eyes with plenty of water.
First aid following ingestion:	Induce vomiting if the victim is conscious. Rinse the mouth thoroughly with water. Consult a physician immediately. If swallowed, give lukewarm water or milk (1/2 litre) to drink.

### 4.2. Main acute and delayed symptoms and effects

Symptoms/injuries:	Not considered a serious hazard if used under normal circumstances.
Symptoms/injuries following inhalation:	Irritation of the airways. Shortness of breath. Coughing. Irritation of the nasal mucosa.
Symptoms/injuries following contact with skin:	Skin irritation. Itching. Redness, pain.
Symptoms/injuries following contact with eyes:	Irritation. Redness.
Symptoms/injuries following ingestion:	Nausea. Diarrhoea. Abdominal pain. Vomiting. Metallic taste.
Chronic symptoms:	Major damage to the sensitive tissue and risk of perforation; harmful if swallowed. Can result in problems with the kidneys, liver and central nervous system.

### 4.3. Reporting the necessary immediate medical care and special treatment

No additional information available

## Section 5: Firefighting Measures

### 5.1. Extinguishing media

Suitable extinguishing media:	Dry powder. Sand.
Unsuitable extinguishing media:	Do not use extinguishing media containing water.

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

Fire hazard:	Can form a flammable and explosive vapour-air mixture.
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### 5.3. Advice for firefighters

Extinguishing instructions:	Cool the exposed vessels by spraying with water or water mist. Exercise extreme caution when fighting a chemical fire. Avoid discharging fire extinguishing water into the environment.
Protection during firefighting:	Do not enter fire zone without suitable safety equipment/clothing, including protective breathing apparatus.

## SECTION 6: Measures to Be Taken in The Event of Accidental Release of The Substance or Mixture

### 6.1. Personal prevention measures, protective equipment and emergency procedures

General measures:	Can form a flammable vapour-air mixture. Make sure there is adequate ventilation.
<b>6.1.1. For non-emergency personnel</b>	
Emergency procedures:	Evacuate personnel to a safe place.
<b>6.1.2. For emergency personnel</b>	
Protective equipment:	Provide cleaning personnel with suitable protection.
Emergency procedures:	Ventilate the area.

### 6.2. Environmental precautions

Do not discharge into sewage or public waters. If pollution of lakes, rivers or sewage occurs, inform the responsible authorities in accordance with local regulations. Avoid discharge into the environment.

### 6.3. Methods and materials for containment and cleaning

Cleaning methods:	Sweep or scrape from the ground into suitable containers. Keep dust formation to a minimum. Store separately from other materials.
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### 6.4. Reference to other sections

See section 8 for use of personal protection equipment. See section 13 for waste disposal after cleaning.

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### SECTION 7: Handling and Storage

#### 7.1. Precautions for safe handling of the substance or mixture

Additional hazards associated with handling:	Avoid contact with eyes and skin and do not inhale vapour and mist. Avoid creating dust.
Precautions for safe handling of the substance or mixture:	Wash hands and other exposed parts using gentle soap and water before eating, drinking, smoking or leaving the work environment. Make sure there is adequate ventilation in the handling area in order to prevent evaporation. No open fire. Smoking prohibited. Avoid contact with air.

#### 7.2. Safe storage conditions, including incompatible products

Storage conditions:	Store in a cool, dry, well-ventilated area. Keep containers closed when not in use.
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#### 7.3. Specific end use(s)



industrial.

### SECTION 8: Measures to Control Exposure/Personal Protection

#### 8.1. Control parameters

Silver powder (7440-50-8)		
THE NETHERLANDS	MAC TGG 8H (mg/m <sup>3</sup> )	0,01 mg/m <sup>3</sup>

#### 8.2. Measures to control exposure

Suitable technical measures:	Emergency eye baths and safety showers should be installed in the vicinity of all exposure hazard areas. Provide the area with local drainage/outlet or general ventilation in order to limit vapour concentration to a minimum. Do not exceed exposure limits (VLE/MAC).
Personal protective equipment:	Avoid unnecessary exposure. Gloves. Safety goggles.  
Hand protection:	The manufacturer can provide the exact penetration time; bear this in mind at all times. Standard EN 374 - Gloves for protection against chemicals. As a result of failed tests, no recommendation for glove material can be given for the product/ the preparation/ the chemical mixture. Select glove material according to penetration times, rates of diffusion and the degradation. The choice of suitable gloves depends not only on the material, but also on other quality characteristics, and varies from one manufacturer to another.
Eye protection:	Safety goggles. Use protective eyewear that meets EN 166 requirements and which is designed to protect against dust particles.
Protection for the skin and body:	Wear suitable protective clothing.
Respiratory protection:	Respiratory protection is recommended if exposure carries a risk of inhalation. No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.
Other information:	Do not eat, drink or smoke during use. Avoid contact with skin and eyes. Do not inhale the substance.

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## SECTION 9: Physical and Chemical Properties.

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

Physical state:	Solid
Appearance:	Powder
Colour:	Pink
Odour:	Odourless
Odour threshold:	No data available
Ph:	No data available
Relative evaporation rate (butyl acetate=1):	No data available
Melting point:	No data available
Coagulation/freezing point:	No data available
Boiling point:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Thermolysis temperature	No data available
Flammability (solid, gas)	Not flammable, can catch fire spontaneously on exposure to air.
Vapour pressure:	No data available
Relative vapour density at 20 °C:	No data available
Relative density:	No data available
Solubility:	Product not soluble in water
Log Pow:	No data available
Viscosity, kinematic;	No data available
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidising properties:	No data available
Explosion points:	No data available

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### 9.2. Other information

No additional information available

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable at room temperature and with normal use.

### 10.3. Potentially hazardous reactions

Hazardous polymerisation: None.

### 10.4. Conditions to avoid

Damp, air

### 10.5. Chemically incompatible materials

Strong acids, basis. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Decomposition due to high temperatures: silver oxide.

## SECTION 11: Toxicological Information

### 11.1. Information on toxicological effects

Acute toxicity:	Not classified
Skin corrosion/irritation:	Not classified Classification criteria are not met based on available data
Serious eye damage/irritation:	Not classified Classification criteria are not met based on available data
Respiratory or skin sensitisation:	Not classified Classification criteria are not met based on available data
Germ cell mutagenicity:	Not classified Classification criteria are not met based on available data
Carcinogenicity:	Not classified Classification criteria are not met based on available data
Reproduction toxicity:	Not classified Classification criteria are not met based on available data
STOT-single exposure:	Not classified Classification criteria are not met based on available data

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STOT-repeated exposure:	Not classified Classification criteria are not met based on available data
Inhalation hazard:	Not classified Classification criteria are not met based on available data
Potential hazardous effects on human health and potential symptoms:	Classification criteria are not met based on available data

## SECTION 12: Ecological Information

### 12.1. Toxicity

Ecology - waste products:	Highly poisonous to aquatic organisms, with long-term consequences.
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### 12.2. Persistence and degradability

<b>Mixture of Aluminium oxide powder - silver powder.</b>	
Persistence and degradability	Can have long-term adverse effects on the environment.
<b>Aluminium oxide powder (1344-28-1)</b>	
Persistence and degradability	Not classified

### 12.3. Bioaccumulation

<b>Mixture of Aluminium oxide powder - silver powder.</b>	
Bioaccumulation	Not classified
<b>Aluminium oxide powder (1344-28-1)</b>	
Bioaccumulation	Not classified

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and zPzB assessments

Mixture contains inorganic substances do not meet the criteria for classification as PBT and vPvB substances.

### 12.6. Other adverse effects

Avoid discharge into the environment



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## SECTION 13: Disposal instructions

### 13.1. Waste treatment methods

Recommendations for waste disposal:	Dispose of safely and in accordance with local/national regulations. P501 - Dispose of content/packaging at a recognised waste disposal centre
No additional information available:	Handle empty vessels with care.
Ecology - waste products:	Avoid discharge into the environment.

## SECTION 14: Disposal instructions

In accordance with ADR/ RID / IMDG/ IATA regulations.

### 14.1. UN number

Not classified as hazardous according to transport legislation

### 14.2. Correct shipping name in accordance with the UN Model Regulations

Not applicable

### 14.3. Transport hazards class

Not applicable

### 14.4. Packing group

Not applicable

### 14.5. Environmental hazards

Other information

### 14.6. Special precautions for the user

This material is tested according to UN criteria and is classified as non-flammable

#### 14.6.1. Land transport

No additional information available

#### 14.6.2. Sea transport

No additional information available

#### 14.6.3. Air transport

No additional information available

#### 14.6.4. Inland waterways transport

No additional information available

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

Not applicable

## SECTION 15: Regulations

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

#### 15.1.1. EU regulations

No limitations in accordance with Annex XVII of REACH  
Do not contain REACH substance candidate list

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety evaluation

No chemical safety evaluation has been conducted

## SECTION 16: Other Information

Sources of data:	EC Regulation no. 1272/2008 OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 16 December 2008 re. the classification, labelling and packing of substances and mixtures as amended and repealed in Regulation 67/548/EEC and 1999/45/EC and as amended in EC Regulation no. 1907/2006.
Other information:	REACH Declaration: All information is based on current knowledge. Consistency of the information listed in this Safety Data Sheet with the information in the Chemical Safety Report is considered to the extent available at the time of compilation (see version number and date of revision). EXCLUSION OF LIABILITY The information provided in this sheet has been gathered from sources which, to the best of our knowledge, are reliable. However, the information was provided without any express or implied regarding its correctness. Conditions regarding the handling, storage, use or disposal of the product fall beyond the scope of our control and also possibly beyond the scope of our knowledge. For this and other reasons, we shall not assume any responsibility for, and expressly disclaim liability for, any loss, damage or expense whatsoever resulting from the handling, storage, use or disposal of the product.

For total content of R, H and EUH phrases:

Aquatic Acute 1	Acute danger for the aquatic environment, Category 1
Aquatic Chronic 1	Chronic danger for the aquatic environment, Category 1
H400	Highly poisonous to aquatic organisms
H410	Highly poisonous to aquatic organisms, with long-term consequences.
R50/53	Highly poisonous to aquatic organisms,; can have long-term adverse effects on the aquatic environment.
N	Environmentally hazardous

### SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purpose of the health, safety and environmental aspects of its use. It should therefore not be regarded as a guarantee for any specific property of the product.*