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

MIXTURE OF ALUMINIUM OXIDE POWDER - ALUMINIUM POWDER



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

	1.1 Product identification
Product type:	Mixture
Product code:	LPP.K-10-01

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
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

www.titomic.com

	1.4. Emergency telephone number			
Country	Organisation / Company	Address	Emergency tel. number	
THE NETHERLANDS	National Poisons Information Center (NVIC) 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	Classit	fication	nof	the su	hsi	tance or	mixture

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

Flam. Sol. 1 H228 Water-react. 2 H261

For total text of H phrases: see section 16

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

F; R11

F; R15

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 [Labelling according to Regulation (EC) no. 1272/2008 [CLP]		
Hazard pictograms (CLP):	GHS02		
Signal word (CLP):	Hazard		
Hazard indication (CLP):	H228 - Flammable solid H261 - Flammable gases released when in contact with water		
Safety recommendations (CLP):	P210 - Keep away from open fire and sparks. Do not smoke P223 - Avoid contact with water. P233 - Keep the packaging closed P241 - Use explosion-proof equipment P280 - Wear protective gloves, protective clothing and eye protection		

2.3. Other hazards

No additional information available.

SECTION 3: Composition of And Information About Ingredients

3.1. Substances

Not applicable

3.2. Mixture				
Name	Productidentification	%	Classification as laid down in Directive 67/548/EEC	
Aluminium oxide powder (99.4% pure)	(CAS no.) 1344-28-1 (EC no.) 215-691-6 (REACH no.) 01-2119529248-35	60-70	Not classified	
Aluminium powder (99.6% pure)	(CAS no.) 7429-90-5 (EC no.) 231-072-3 (EU Identification number) 013-002-00-1 (REACH no.) 01-2119529243-45		F;R11 F;R15	
Name Productidentification		%	Classification according to Regulation (EC) no. 1272/2008 [CLP]	
Aluminium oxide powder (99.4% pure) (CAS no.) 1344-28-1 (EC no.) 215-691-6 (REACH no.) 01-2119529248-35		60-70	Not classified	
Aluminium powder (99.6% pure)	(CAS no.) 7429-90-5 (EC no.) 231-072-3 (EU Identification number) 013-002-00-1 (REACH no.) 01-2119529243-45	30-40	Water-react. 2, H261 Flam. Sol. 1, H228	

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 freshair. 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.	
First aid following contact with eyes:	Rinse immediately with plenty of water. Seek medical assistance if pain or redness persists. Lift eyelids using fingers and flush the eyes with plenty of water.	
First aid following ingestion:	Rinse the mouth thoroughly with water. DO NOT induce vomiting. Consult a physician immediately.	
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.:	Can cause irritation of the airways. Shortness of breath. Coughing. Asthmatic symptoms.	

4.3. Reporting the necessary immediate medical care and special treatment

Direct contact with the eyes is likely to cause irritation.

No additional information available

Section 5: Firefighting Measures

Symptoms/injuries following contact with eyes:

5.1. Extinguishing media		
Suitable extinguishing media	Sand.	
Unsuitable extinguishing media:	Do not use water jet. Carbon dioxide.	
5.2. Special haz	ards arising from the substance or mixture	
Fire hazard:	Flammable solid substance. Do not expose to heat.	
Explosion hazard.:	Can form a flammable/explosive vapour-air mixture.	
	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.	









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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:	Extinguish sources of ignition. Take special precautions to avoid static electricity charges. No open fire. Smoking prohibited.	
6.1.1. For non-emergency personnel		
Emergency procedures:	Evacuate personnel to a safe place.	
6.1.2. For emergency personnel		
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, informed the responsible authorities in accordance with local regulations.

Sweep or scrape from the ground into suitable containers. Keep dust formation to a minimum. Store separately from other materials. Significant amounts of released materials: sweep spilled solids into sealable containers.	6.3. Methods and materials for containment and cleaning	
	Cleaning methods:	minimum. Store separately from other materials. Significant amounts of released

6.4. Reference to other sections

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

SECTION 7: Handling and Storage

7.1. Precautions for safe handling of the substance or mixture		
Additional hazards associated with handling:	Avoid contact with water to avoid violent reaction and possible flash fire. Avoid contact with skin and eyes. 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.	
7.2. Safe storage conditions, including incompatible products		
Technical measures:	Follow the correct earthing procedures in order to avoid static electricity. Earth storage and collection reservoirs.	
Storage conditions:	Keep containers closed when not in use. Sources of heat. Direct sunlight. Store in a fireproof place. Keep away from moisture. Store in a dry, cool, and extremely well-ventilated place. Can disintegrate or explode under the influence of heat or on contact with incompatible products.	
Incompatible substances:	Strong alkalines. Strong acids.	





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7.2. Safe storage conditions, including incompatible products		
Incompatible substances:	Remove all sources of ignition. Protect the product from direct sunlight. Avoid contact with air. Avoid contact with moisture.	
Special instructions for packaging:	Store in sealed packaging.	
	7.3. Specific end use(s)	
industrial.		

SECTION 8: Measures to Control Exposure/Personal Protection

8.1. Control parameters

No additional information available

8.2. Measures to control exposure		
Suitable technical measures:	Do not exceed exposure limits (VLE/MAC). Keep away from sources of ignition. 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.	
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. Select glove material according to penetration times, rates of diffusion and the degradation As a result of failed tests, no recommendation for glove material can be given for the product/ the preparation/ the chemical mixture. 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.	

SECTION 9: Physical and Chemical Properties

9.1. Information about basic physical and chemical properties	
Physical state:	Solid (Metal powder)
Colour:	Silver grey.
Odour:	odourless.
Odour threshold:	No data available







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9.1. Information about basic physical and chemical properties		
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):	Flammable solid substance, flammable gases released on contact with water	
Vapour pressure:	No data available	
Relative vapour density at 20 °C:	No data available	
Relative density:	No data available	
Solubility:	Product 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	

9.2. Other information

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Can form a flammable/explosive vapour-air mixture. The product is stable under normal handling and storage conditions.

10.3. Potentially hazardous reactions

Hazardous polymerisation: None.

10.4. Conditions to avoid

Air, damp.









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10.5. C	hemicall	v incomi	patible	materials

Strong acids. Strong alkalines.

10.6. Hazardous decomposition products

Flammable hydrogen gas may be released on contact with metallic substances.

SECTION 11: Toxological Information

11.1. Information on toxological 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	
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

1017			
12.1. 7	OXI	CITA	/

No additional information available

No additional million available		
12.2. Persistence and degradability		
Mixture of Aluminium oxide powder - Aluminium powder		
Persistence and degradability	Not classified	
Aluminium oxide powder (1344-28-1)		
Persistence and degradability	Not classified	
12.3. Bioaccumulation		
Mixture of Aluminium oxide powder - Aluminium powder		





Bioaccumulation

Not classified

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	12.3. Bioaccumulation	
Aluminium oxide powder (1344-28-1)		
Bioaccumulation	Not classified	
	12.4. Mobility in soil	
No additional information available	12.4. Mobility III Soil	
No additional mormation available		
1	12.5. Results of PBT and zPzB assessments	
No additional information available		
	12.6. Other adverse effects	
	Avoid discharge into the environment	
SECTION 13: Disposal Instructi	ions	
	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	
Ecology - waste products:	Avoid discharge into the environment.	
SECTION 14: Transport Inform	nation	
In accordance with ADR/RID/IMDG/IATA regu		
	14.1. UN number	
UN no.:	Not classified	
UN no. (IATA):	Not classified	
UN no. (IMDG):	Not classified	
UN no. (ADN):	Not classified	
14.2. Correct shipping name in accordance with the UN Model Regulations		
Correct shipping name:	METAL POWDER	
14.3. Transport hazards class		
Class (VN):	-	
Classification code (VN):	-	
Class (IATA):	-	
Class (IMDG):	-	
Class (ADN):	-	



Hazard labels (UN):

Packing group (UN):

14.4. Packing group



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	14.5. Environmental hazards
Other information:	No additional information available

14.6. Special precautions for the user

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

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.











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For total content of R, H and EUH phrases:		
Flam. Sol. 1	Flammable solids, Category 1	
Water-react. 2	Substances and mixtures which develop flammable gases when in contact with water, Categories 2	
H228	Flammable solid	
H261	Flammable gases released when in contact with water	
R11	Highly flammable	
R15	Forms extremely flammable gas when in contact with water	
F	Highly flammable	

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.





