SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 02-May-2022 **Revision Number** 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) ECRM-D 631-1

Product Name Venezuela iron ore, powder

Pure substance/mixture Mixture

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

Recommended use Laboratory use

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM
:+44 (0) 20 8943 7000
Fax :+44 (0) 20 8943 2767
eMail : gb@lgcstandards.com

Web : www.lgcstandards.com

For further information, please contact

E-mail address sds-request@lgcgroup.com

1.4. Emergency telephone number

Emergency Telephone For Hazardous Materials or Dangerous Goods Incident
Spill, Leak, Fire Exposure, or Accident
Call CHEMTREC:
USA & Canada 1-800-424-9300
Rest of the world +1 703-741-5970

Emergency Telephone - §45 - (EC)1272/2008	
Europe	**112**
Austria	No information available
Bulgaria	

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Croatia	
Cyprus	
Czech Republic	
Denmark	
France	
Hungary	
Ireland	
Italy	
Lithuania	
Luxembourg	(+352) 8002 5500 Free telephone number with a 24/7 access in French, Dutch and English.
Netherlands	
Norway	
Portugal	
Romania	
Slovakia	
Slovenia	
Spain	
Sweden	
Switzerland	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Serious eye damage/eye irritation	Category 2 - (H319)
Carcinogenicity	Category 2 - (H351)

2.2. Label elements

Contains Silicon Dioxide

Signal word
Warning

Hazard statements
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer

Precautionary Statements - EU (§28, 1272/2008)

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P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Silicon Dioxide 7631-86-9	3 - <5	-	231-545-4	Eye Irrit. 2 (H319) Carc. 2 (H351) STOT SE 3 (H335)			
aluminium oxide 1344-28-1	1 - <3	-	215-691-6	-			
Calcium oxide 1305-78-8	0.1 - 1	-	215-138-9	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 3 (H335)			
Magnesium oxide 1309-48-4	0.1 - 1	-	215-171-9	Eye Irrit. 2 (H319)			
Elemental phosphorus in alloys 7723-14-0	0.1 - 1	-	231-768-7	-			
Titanium dioxide 13463-67-7	0.1 - 1	-	236-675-5	Carc. 2 (H351i)			
Manganese 7439-96-5	<0.1	-	231-105-1	Aquatic Chronic 2 (H411)			

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Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Silicon Dioxide 7631-86-9	7900	5000	2.08	No data available	No data available
aluminium oxide 1344-28-1	5000	No data available	No data available	No data available	No data available
Calcium oxide 1305-78-8	500	No data available	6.04	No data available	No data available
Magnesium oxide 1309-48-4	3870 3990	No data available	No data available	No data available	No data available
Elemental phosphorus in alloys 7723-14-0	15000	No data available	No data available	No data available	No data available
Titanium dioxide 13463-67-7	10000	No data available	5.09	No data available	No data available
Manganese 7439-96-5	9000	No data available	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce

vomiting. Call a doctor.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

Symptoms May cause redness and tearing of the eyes. Burning sensation.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM)	The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Silicon Dioxide 7631-86-9	TWA: 0.1 mg/m³	TWA: 4 mg/m³	-	TWA: 0.1 mg/m³	-
aluminium oxide 1344-28-1	-	TWA: 5 mg/m³ STEL 10 mg/m³	TWA: 1 mg/m³	TWA: 10.0 mg/m³ TWA: 1.5 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³
Calcium oxide 1305-78-8	STEL: 4 mg/m³ respirable fraction	TWA: 1 mg/m³ STEL 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	STEL: 4 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³

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	TWA: 1 mg/m³ respirable fraction				
Magnesium oxide 1309-48-4	-	TWA: 5 mg/m³ TWA: 10 mg/m³ STEL 20 mg/m³ STEL 10 mg/m³	TWA: 10 mg/m³	TWA: 10.0 mg/m³	TWA: 4 mg/m³ TWA: 10 mg/m³
Elemental phosphorus in alloys 7723-14-0	-	TWA: 0.1 mg/m³ STEL 0.2 mg/m³	-	-	TWA: 0.1 mg/m³ STEL: 0.3 ppm
Titanium dioxide 13463-67-7	-	TWA: 5 mg/m³ STEL 10 mg/m³	TWA: 10 mg/m³	TWA: 10.0 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³
Manganese 7439-96-5	TWA: 0.2 mg/m³ inhalable fraction	TWA: 0.2 mg/m³ STEL 1.6 mg/m³	TWA: 0.2 mg/m³	TWA: 0.2 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Silicon Dioxide 7631-86-9	-	TWA: 0.1 mg/m³ TWA: 4.0 mg/m³	-	TWA: 2 mg/m³	TWA: 5 mg/m³
aluminium oxide 1344-28-1	-	TWA: 10.0 mg/m³	TWA: 5 mg/m³ TWA: 2 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³	-
Calcium oxide 1305-78-8	STEL: 4 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ Ceiling: 4 mg/m³	TWA: 1 mg/m³ TWA: 2 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³
Magnesium oxide 1309-48-4	-	TWA: 5 mg/m³ Ceiling: 10 mg/m³	TWA: 6 mg/m³	-	-
Elemental phosphorus in alloys 7723-14-0	-	TWA: 0.1 mg/m³ Ceiling: 0.3 mg/m³	-	TWA: 0.1 mg/m³	-
Titanium dioxide 13463-67-7	-	-	TWA: 6 mg/m³	TWA: 5 mg/m³	-
Manganese 7439-96-5	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ Ceiling: 0.4 mg/m³ Ceiling: 0.1 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³
Chemical name	France	Germany	Germany MAK	Greece	Hungary
Silicon Dioxide 7631-86-9	-	TWA: 4 mg/m³	TWA: 4 mg/m³	TWA: 0.1 mg/m³	-
aluminium oxide 1344-28-1	TWA: 10 mg/m³	TWA: 1.25 mg/m³ TWA: 10 mg/m³	TWA: 4 mg/m³ TWA: 1.5 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³	TWA: 5 mg/m³ TWA: 2 mg/m³
Calcium oxide 1305-78-8	TWA: 2 mg/m³	TWA: 1 mg/m³	TWA: 1 mg/m³ Peak: 2 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³
Magnesium oxide 1309-48-4	TWA: 10 mg/m³	TWA: 1.25 mg/m³ TWA: 10 mg/m³	TWA: 0.3 mg/m³ TWA: 4 mg/m³ Peak: 2.4 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³	TWA: 6 mg/m³
Elemental phosphorus in alloys 7723-14-0	-	-	TWA: 0.01 mg/m³ Peak: 0.02 mg/m³	TWA: 0.1 mg/m³ STEL: 0.3 mg/m³	TWA: 0.1 mg/m³ STEL: 0.1 mg/m³
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 1.25 mg/m³ TWA: 10 mg/m³	TWA: 0.3 mg/m³ Peak: 2.4 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³	-
Manganese 7439-96-5	TWA: 1 mg/m³	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³

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			Peak: 1.6 mg/m³ Peak: 0.16 mg/m³		
Chemical name	Ireland	Italy	Italy REL	Latvia	Lithuania
Silicon Dioxide 7631-86-9	TWA: 6 mg/m³ TWA: 2.4 mg/m³ STEL: 18 mg/m³ STEL: 7.2 mg/m³	-	-	TWA: 1 mg/m³	-
aluminium oxide 1344-28-1	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³	-	TWA: 1 mg/m³	TWA: 6 mg/m³	TWA: 5 mg/m³ TWA: 2 mg/m³
Calcium oxide 1305-78-8	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³	TWA: 2 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³
Magnesium oxide 1309-48-4	TWA: 4 mg/m³ TWA: 5 mg/m³ TWA: 10 mg/m³ STEL: 10 mg/m³ STEL: 12 mg/m³ STEL: 30 mg/m³	-	TWA: 10 mg/m³	-	TWA: 4 mg/m³
Elemental phosphorus in alloys 7723-14-0	-	-	-	TWA: 0.03 mg/m³	-
Titanium dioxide 13463-67-7	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³	-	TWA: 10 mg/m³	TWA: 10 mg/m³	TWA: 5 mg/m³
Manganese 7439-96-5	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ TWA: 0.02 mg/m³ STEL: 0.15 mg/m³ STEL: 0.6 mg/m³ STEL: 3 mg/m³	TWA: 0.2 mg/m³	TWA: 0.02 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Silicon Dioxide 7631-86-9	-	-	TWA: 0.75 mg/m³	TWA: 1.5 mg/m³ STEL: 3 mg/m³	-
aluminium oxide 1344-28-1	-	-	-	TWA: 10 mg/m³ STEL: 15 mg/m³	TWA: 2.5 mg/m³ TWA: 1.2 mg/m³
Calcium oxide 1305-78-8	TWA: 1 mg/m³	STEL: 4 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	STEL: 6 mg/m³ STEL: 4 mg/m³ TWA: 2 mg/m³ TWA: 1 mg/m³
Magnesium oxide 1309-48-4	-	-	-	TWA: 10 mg/m³ STEL: 20 mg/m³	TWA: 10 mg/m³
Elemental phosphorus in alloys 7723-14-0	-	-	-	STEL: 0.3 mg/m³	-
Titanium dioxide 13463-67-7	-	-	-	TWA: 5 mg/m³ STEL: 10 mg/m³	STEL: 30 mg/m³ TWA: 10 mg/m³

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Manganese 7439-96-5	-	TWA: 0.2 mg/m³ TWA: 0.5 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ STEL: 0.6 mg/m³ STEL: 0.15 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³

Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Silicon Dioxide 7631-86-9	-	-	-	TWA: 4 mg/m³	-
aluminium oxide 1344-28-1	TWA: 10 mg/m³	TWA: 2 mg/m³ TWA: 3 mg/m³ TWA: 1 mg/m³ STEL: 5 mg/m³ STEL: 10 mg/m³ STEL: 3 mg/m³	TWA: 4 mg/m³ TWA: 1.5 mg/m³	-	TWA: 10 mg/m³
Calcium oxide 1305-78-8	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 5 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³
Magnesium oxide 1309-48-4	TWA: 10 mg/m³	TWA: 5 mg/m³ STEL: 15 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³	-	TWA: 10 mg/m³
Elemental phosphorus in alloys 7723-14-0	-	-	TWA: 0.05 mg/m³ Ceiling: 0.1 mg/m³	-	-
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 10 mg/m³ STEL: 15 mg/m³	TWA: 5 mg/m³	-	TWA: 10 mg/m³
Manganese 7439-96-5	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³	TWA: 0.2 mg/m³ STEL: 1.6 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³

Chemical name	Sweden	Switzerland	United Kingdom
Silicon Dioxide 7631-86-9	-	TWA: 4 mg/m³	TWA: 6 mg/m³ TWA: 2.4 mg/m³ STEL: 18 mg/m³ STEL: 7.2 mg/m³
aluminium oxide 1344-28-1	NGV: 5 mg/m³ NGV: 2 mg/m³	TWA: 3 mg/m³ STEL: 24 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³
Calcium oxide 1305-78-8	NGV: 1 mg/m³ Bindande KGV: 4 mg/m³	TWA: 1 mg/m³ STEL: 4 mg/m³	TWA: 1 mg/m³ TWA: 2 mg/m³ STEL: 4 mg/m³ STEL: 6 mg/m³
Magnesium oxide 1309-48-4	-	TWA: 3 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³
Titanium dioxide 13463-67-7	NGV: 5 mg/m³	TWA: 3 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³
Manganese 7439-96-5	NGV: 0.2 mg/m³ NGV: 0.05 mg/m³	TWA: 0.5 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ TWA: 0.6 mg/m³ STEL: 0.15 mg/m³

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Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
aluminium oxide 1344-28-1	-	60 µg/g Creatinine (urine - Aluminum after end of work day, at the end of a work week/end of the shift) (-)	-	-	-
Manganese 7439-96-5	-	20 µg/L (blood - whole blood not provided) (-)	-	-	-

Chemical name	Denmark	Finland	France	Germany	Germany
Manganese 7439-96-5	-	-	-	15 µg/L - BAR (end of exposure or end of shift) blood 15 µg/L - BAR (for long-term exposures: at the end of the shift after several shifts) blood	-

Chemical name	Latvia	Luxembourg	Romania	Slovakia
Manganese 7439-96-5	-	-	10 µg/L - urine (Manganese) - end of shift	-

Chemical name	Slovenia	Spain	Switzerland	United Kingdom
aluminium oxide 1344-28-1	-	-	60 µg/g creatinine (urine - Aluminum no restrictions)	-
Manganese 7439-96-5	-	-	20 µg/L (whole blood - Manganese end of shift, and after several shifts (for long-term exposures))	-

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection	The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective butyl rubber gloves. Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.
Environmental exposure controls	Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Solid
Colour	No information available
Odour	No information available.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	No data available	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known

Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regards to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

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Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. Prolonged contact may cause redness and irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes.

Numerical measures of toxicity
No information available

Acute toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Silicon Dioxide	= 7900 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 2.08 mg/L (Rat) 4 h
aluminium oxide	> 5000 mg/kg (Rat)		
Calcium oxide	= 500 mg/kg (Rat)		> 6.04 mg/L (Rat) 4 h
Magnesium oxide	= 3870 mg/kg (Rat) = 3990 mg/kg (Rat)		
Elemental phosphorus in alloys	> 15000 mg/kg (Rat)		= 4.3 mg/L (Rat) 1 h
Titanium dioxide	> 10000 mg/kg (Rat)		= 5.09 mg/L (Rat) 4 h
Manganese	= 9 g/kg (Rat)		> 5.14 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Titanium dioxide	Carc. 2

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Unknown aquatic toxicity Contains 33.06 % of components with unknown hazards to the aquatic environment.

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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Silicon Dioxide	EC50: =440mg/L (72h, Pseudokirchneriella subcapitata)	LC50: =5000mg/L (96h, Brachydanio rerio)	-	EC50: =7600mg/L (48h, Ceriodaphnia dubia)
Calcium oxide	-	LC50: =1070mg/L (96h, Cyprinus carpio)	-	-
Elemental phosphorus in alloys	-	LC50: 0.001 - 0.004mg/L (96h, Lepomis macrochirus) LC50: 0.0017 - 0.0035mg/L (96h, Lepomis macrochirus) LC50: 0.011 - 0.028mg/L (96h, Pimephales promelas) LC50: 0.015 - 0.032mg/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Brachydanio rerio)	-	EC50: 0.025 - 0.037mg/L (48h, Daphnia magna) EC50: =0.03mg/L (48h, Daphnia magna)
Manganese	-	LC50: >3.6mg/L (96h, Oncorhynchus mykiss)	-	-

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Silicon Dioxide	The substance is not PBT / vPvB PBT assessment does not apply
aluminium oxide	The substance is not PBT / vPvB PBT assessment does not apply
Calcium oxide	The substance is not PBT / vPvB PBT assessment does not apply

Elemental phosphorus in alloys	The substance is not PBT / vPvB PBT assessment does not apply
Titanium dioxide	The substance is not PBT / vPvB PBT assessment does not apply
Manganese	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions None

IMDG

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant Not applicable
14.6 Special precautions for user
Special Provisions None No information available
14.7 Maritime transport in bulk according to IMO instruments No information available

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RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Silicon Dioxide 7631-86-9	RG 25	-
Elemental phosphorus in alloys 7723-14-0	RG 5	-

Germany

Water hazard class (WGK) non-hazardous to water (nwg)

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Carcinogens	Netherlands - List of Reproductive Toxins
Manganese	-	-	Fertility Category 2 Development Category 2

Poland **SDS created according to the following Polish regulation: Act of February 25, 2011 on chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the**

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Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650) . Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union

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.

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Titanium dioxide - 13463-67-7	75.	

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

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Biocidal Products Regulation (EU) No 528/2012 (BPR)

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer
H351i - Suspected of causing cancer if inhaled
H411 - Toxic to aquatic life with long lasting effects

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

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Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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End of Safety Data Sheet