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

1.1. Product identifier

Trade name : CROMAROD® 625

Type of product : Stick electrode for welding

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Arc Welding

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ITW Welding GmbH
Spechttal 1a
67317 Altleiningen - Germany
T +49 6356 966 119 - F +49 6356 966 206
sds.europe@itwwelding.com - www.ElgaWelding.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Specific target organ toxicity — Repeated exposure, Category 1	H372
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available.

2.2. Label elements

Welding consumables have a compact constitution and are to be considered as equivalent to metals in massive form. Consequently, derogation from labelling requirements shall apply according to EEC/67/548 directive (Annexe VI) and 1272/2008 (EC) regulation (Article 23).
No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification : When the product is used in the welding process the most important hazards are: Overexposure to fumes and gases from welding can be dangerous to health. Watch out for splatter, hot metal and slag. It may cause skin burn and cause fire. Arc rays can injure eyes and burn skin. Electric shock: can kill. Avoid touching live electrical parts.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nickel (Ni)	(CAS-No.) 7440-02-0 (EC-No.) 231-111-4 (EC Index-No.) 028-002-01-4 (REACH-no) 01-2119438727-29	≤ 70	Carc. 2, H351 Skin Sens. 1, H317 STOT RE 1, H372 Aquatic Chronic 3, H412
Chromium	(CAS-No.) 7440-47-3 (EC-No.) 231-157-5	≤ 25	Not classified
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	≤ 10	Not classified
Molybdenum (Mo)	(CAS-No.) 7439-98-7 (EC-No.) 231-107-2	≤ 10	Not classified
limestone powder	(CAS-No.) 1317-65-3 (EC-No.) 215-279-6	≤ 10	Not classified
Cryolite	(CAS-No.) 13775-53-6 (EC-No.) 237-410-6 (EC Index-No.) 009-016-00-2	≤ 10	STOT RE 1, H372 Acute Tox. 4 (Inhalation), H332 Aquatic Chronic 2, H411
Potassium silicate	(CAS-No.) 1312-76-1 (EC-No.) 215-199-1	≤ 5	Not classified
Sodium Silicate	(CAS-No.) 1344-09-8 (EC-No.) 215-687-4	≤ 5	Eye Dam. 1, H318 Skin Irrit. 2, H315
Niobium	(CAS-No.) 7440-03-1 (EC-No.) 231-113-5	≤ 4	Not classified
Manganese (Mn)	(CAS-No.) 7439-96-5 (EC-No.) 231-105-1	≤ 2	Not classified
Iron	(CAS-No.) 7439-89-6 (EC-No.) 231-096-4	≤ 2	Not classified
Silicon (Si)	(CAS-No.) 7440-21-3 (EC-No.) 231-130-8	≤ 1	Flam. Sol. 2, H228

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention. Burns should be treated by doctor.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Burns from radiation, see doctor.

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

Symptoms/effects after inhalation : Welding fumes are classified carcinogenic to humans "group 1" by IARC (Monograph 118, 2017).

Symptoms/effects after skin contact : The melted product adheres to the skin and causes burns.

Symptoms/effects after eye contact : Arc rays can injure eyes and burn skin. Irritation or eye burns due to the radiation thermal, infrared, or ultraviolet (arc welding).

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : No specific recommendations for welding consumables. Use the extinguishing media recommended for the burning materials and fire situation. Welding arcs and sparks can ignite combustible and flammable materials.

5.2. Special hazards arising from the substance or mixture

Fire hazard : The product is not flammable.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. Skin contact should be avoided to prevent possible allergic reactions.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Try to prevent the material from entering drains or water courses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Notify authorities if product enters sewers or public waters. Take up mechanically (preferable by vacuum cleaning or gentle sweeping).

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Ensure adequate ventilation for the welder and others. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry protected location to prevent any moisture contact.

7.3. Specific end use(s)

Welding Products.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Manganese (Mn) (7439-96-5)	
EU - Occupational Exposure Limits	
Local name	Manganese
IOELV TWA (mg/m³)	0.2 mg/m³ (Inhalable fraction) 0.05 mg/m³ (Respirable fraction)
Notes	(Year of adoption 2011)
Regulatory reference	SCOEL Recommendations
Ireland - Occupational Exposure Limits	
Local name	Manganese, fume (as Mn)
OEL (8 hours ref) (mg/m³)	0.2 mg/m³ I (Inhalable Fraction) 0.02 mg/m³ R (Respirable Fraction)
OEL (15 min ref) (mg/m3)	3 mg/m³
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	0.2 mg/m³ 0.05 mg/m³

Titanium dioxide (13463-67-7)	
Ireland - Occupational Exposure Limits	
Local name	Titanium dioxide
OEL (8 hours ref) (mg/m³)	10 mg/m³ total inhalable dust 4 mg/m³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	10 mg/m³ 4 mg/m³

Chromium (7440-47-3)	
EU - Occupational Exposure Limits	
Local name	Chromium metal
IOELV TWA (mg/m³)	2 mg/m³
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Ireland - Occupational Exposure Limits	
Local name	Chromium metal
OEL (8 hours ref) (mg/m³)	2 mg/m³
Notes (IE)	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	0.5 mg/m³

Nickel (Ni) (7440-02-0)	
EU - Occupational Exposure Limits	
Local name	Nickel metal
IOELV TWA (mg/m³)	0.005 mg/m³ (respirable fraction)
Notes	(Year of adoption 2011)
Regulatory reference	SCOEL Recommendations
EU - Biological limit values	
Local name	Nickel and nickel compounds
European - BGV	3 µg/l Parameter: nickel - Medium: urine
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Ireland - Occupational Exposure Limits	
Local name	Nickel
OEL (8 hours ref) (mg/m³)	0.5 mg/m³
Notes (IE)	Sens. (In the workplace respiratory or dermal exposures to sensitising agents may occur. Sensitizers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The notation does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitizers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE))
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	0.5 mg/m³

Molybdenum (Mo) (7439-98-7)	
Ireland - Occupational Exposure Limits	
Local name	Molybdenum compounds (as Mo)
OEL (8 hours ref) (mg/m³)	0.5 mg/m³ R (Respirable Fraction) 10 mg/m³ soluble compounds, I (Inhalable Fraction) 3 mg/m³ insoluble compounds, R (Respirable Fraction)
Regulatory reference	Chemical Agents Code of Practice 2020

Silicon (Si) (7440-21-3)	
Ireland - Occupational Exposure Limits	
Local name	Silicon Si
OEL (8 hours ref) (mg/m³)	10 mg/m³ total inhalable dust 4 mg/m³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	10 mg/m³ 4 mg/m³

limestone powder (1317-65-3)	
Ireland - Occupational Exposure Limits	
Local name	Calcium carbonate [Limestone, Marble]
OEL (8 hours ref) (mg/m³)	10 mg/m³ total inhalable dust 4 mg/m³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	10 mg/m³ 4 mg/m³ 10 mg/m³ 4 mg/m³

Cryolite (13775-53-6)	
EU - Occupational Exposure Limits	
IOELV TWA (mg/m³)	2.5 mg/m³
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m³)	2.5 mg/m³

8.2. Exposure controls

Appropriate engineering controls:
General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits.

Materials for protective clothing:
Clothing protection suitable for welding operations and comply with standards EN 470 - 1 and EN 531.

Hand protection:
Welding gloves in leather and refractory fleece with cufflinks, complying with standard EN 12477.

Eye protection:
Eye protection equipment must conform to standard EN 175.

Skin and body protection:
Clothing protection suitable for welding operations and comply with standards EN 470 - 1 and EN 531.

Respiratory protection:
When using the product in a confined environment or excessive production of smoke, wear a mask equipped with a built-in respiratory filter type FFP3 or a stand-alone system ventilation, complies with EN 12941.

Personal protective equipment symbol(s):

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	No data available
Odour	:	No data available
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	> 1200 °C
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	The product is not flammable
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/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
Explosive limits	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is not flammable.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Acids, alkalis and oxidizing agent.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Welding fumes and gases. Additional fume may arise from coatings and contaminants on the base material. Refer to applicable national exposure limits for welding fume and its compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Inhalation of vapors may cause drowsiness, dizziness, cough and headache. High concentrations of fumes and dusts may result in metal fume fever. Short-term overexposure can cause dizziness, nausea and irritation of the nose, throat or eyes. Overexposure to manganese may affect the nervous system

Manganese (Mn) (7439-96-5)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method), Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LC50 Inhalation - Rat	> 5.14 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation))

Iron (7439-89-6)	
LD50 oral rat	98600 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral)
LC50 Inhalation - Rat	> 0.25 mg/l (6 h, Rat, Male, Experimental value, Inhalation (dust))

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 6.82 mg/l (Other, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s))

Potassium silicate (1312-76-1)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LD50 dermal rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 2.06 mg/l air Animal: rat, Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)

Sodium Silicate (1344-09-8)	
LD50 oral rat	> 2000 mg/kg (Rat, Oral)

Chromium (7440-47-3)	
LD50 oral rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 420, Rat, Male / female, Read-across, Oral, 14 day(s))
LC50 Inhalation - Rat	> 5.41 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol), 14 day(s))

Nickel (Ni) (7440-02-0)	
LD50 oral rat	> 9000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)

Molybdenum (Mo) (7439-98-7)	
LD50 oral rat	> 2000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 2000 mg/kg Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	> 3.92 mg/l Source: ECHA

limestone powder (1317-65-3)	
LD50 oral rat	6450 mg/kg (Rat, Literature study, Oral)

Cryolite (13775-53-6)	
LC50 Inhalation - Rat	4.47 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))

Niobium (7440-03-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : May cause thermal burns. Arc rays can injure eyes and burn skin
Serious eye damage/irritation : May irritate eyes and skin. Arc rays can injure eyes and burn skin
Respiratory or skin sensitisation : Repeated or prolonged skin contact can result in sensitisation in susceptible individuals. Nickel is the most common of all causes of allergic contact dermatitis
Germ cell mutagenicity : Not classified
Carcinogenicity : Certain chromium and nickel compounds, like Cr(VI) are suspected of being cancer causing agents. Quartz is carcinogenic to humans. Welding fumes are possibly carcinogenic to humans

CROMAROD® 625	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified

Potassium silicate (1312-76-1)	
NOAEL (animal/female, F0/P)	> 159 mg/kg bodyweight Animal: rat, Animal sex: female

STOT-single exposure : Not classified

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Chromium (7440-47-3)	
LOAEC (inhalation, rat,dust/mist/fume, 90 days)	≥ 0.0044 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Molybdenum (Mo) (7439-98-7)	
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0.1 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Niobium (7440-03-1)	
NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The welding process can affect the environment if fume is released directly into the atmosphere. Residues from welding consumables could degrade and accumulate into soils and ground water.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Not rapidly degradable

Manganese (Mn) (7439-96-5)	
LC50 fish 1	> 3.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	> 1.6 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae (1)	4.5 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h algae (2)	2.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 (algae)	4.5 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value)
NOEC (chronic)	1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '8 d'

Iron (7439-89-6)	
EC50 Daphnia 1	> 100 mg/l Test organisms (species): Daphnia magna
EC50 Daphnia 2	> 10000 mg/l Test organisms (species): Daphnia magna

Titanium dioxide (13463-67-7)	
LC50 fish 1	> 100 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	61 mg/l (EPA 600/9-78-018, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

Potassium silicate (1312-76-1)	
EC50 72h algae (1)	207 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Sodium Silicate (1344-09-8)	
LC50 fish 1	3185 mg/l (96 h, Brachydanio rerio, Not neutralized)
EC50 Daphnia 1	216 mg/l (96 h, Daphnia magna)
EC50 Daphnia 2	160 mg/l (96 h, Amphipoda)

Nickel (Ni) (7440-02-0)	
LC50 fish 1	15.3 mg/l (Other, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nickel ion)

Molybdenum (Mo) (7439-98-7)	
LC50 fish 1	0.79 mg/l (672 h, Salmo gairdneri)
EC50 72h algae (1)	289.2 mg/l Source: ECHA

limestone powder (1317-65-3)	
LC50 fish 1	> 10000 mg/l (96 h, Oncorhynchus mykiss, Literature)
EC50 Daphnia 1	> 1000 mg/l (48 h, Daphnia magna, Literature)
EC50 72h algae (1)	> 200 mg/l (Desmodesmus subspicatus, Literature)

Cryolite (13775-53-6)	
LC50 fish 1	99 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Static system, Fresh water, Experimental value)
EC50 Daphnia 1	156 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae (1)	3.2 mg/l (OECD 201: Alga, Growth Inhibition Test, Selenastrum capricornutum, Static system, Fresh water, Experimental value, Biomass)

12.2. Persistence and degradability

Manganese (Mn) (7439-96-5)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Iron (7439-89-6)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Titanium dioxide (13463-67-7)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Sodium Silicate (1344-09-8)	
Persistence and degradability	Biodegradability: not applicable.

Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Chromium (7440-47-3)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Nickel (Ni) (7440-02-0)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Molybdenum (Mo) (7439-98-7)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Silicon (Si) (7440-21-3)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.
Chemical oxygen demand (COD)	Not applicable
BOD (% of ThOD)	Not applicable

limestone powder (1317-65-3)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Cryolite (13775-53-6)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Manganese (Mn) (7439-96-5)	
BCF fish 1	81 (Pisces)
BCF other aquatic organisms 1	300000 (Mollusca)
BCF other aquatic organisms 2	125000 (Crustacea)
Bioaccumulative potential	No data available concerning bioaccumulation.

Iron (7439-89-6)	
Bioaccumulative potential	No data available concerning bioaccumulation.

Titanium dioxide (13463-67-7)	
Bioaccumulative potential	No data available concerning bioaccumulation.

Sodium Silicate (1344-09-8)	
Bioaccumulative potential	Bioaccumulation: not applicable.

Chromium (7440-47-3)	
BCF fish 1	0.0048 (Pisces, Literature study, Dry weight)
Bioaccumulative potential	No data available concerning bioaccumulation.

Nickel (Ni) (7440-02-0)	
BCF other aquatic organisms 1	1555 (Other, Myrriophyllum sp., Fresh water, Experimental value, Nickel ion)
Partition coefficient n-octanol/water (Log Pow)	-0.57 (Estimated value)
Bioaccumulative potential	Bioaccumulative potential.

Molybdenum (Mo) (7439-98-7)	
BCF fish 1	260 – 500 (Tilapia rendalli)
Partition coefficient n-octanol/water (Log Pow)	0.23 Source: SRC Access on Jan 2006
Bioaccumulative potential	No data available concerning bioaccumulation.

limestone powder (1317-65-3)	
Bioaccumulative potential	Bioaccumulation: not applicable.

Cryolite (13775-53-6)	
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

Manganese (Mn) (7439-96-5)	
Ecology - soil	No data available.

Iron (7439-89-6)	
Ecology - soil	Adsorbs into the soil.

Titanium dioxide (13463-67-7)	
Ecology - soil	Potential for mobility in soil is slight.

Sodium Silicate (1344-09-8)	
Ecology - soil	No (test)data on mobility of the components available.

Chromium (7440-47-3)	
Surface tension	No data available (test not performed)
Ecology - soil	No data available.

Nickel (Ni) (7440-02-0)	
Ecology - soil	No data available.

Molybdenum (Mo) (7439-98-7)	
Ecology - soil	Adsorbs into the soil.

Silicon (Si) (7440-21-3)	
Surface tension	0.74 N/m (1410 °C)

limestone powder (1317-65-3)	
Ecology - soil	No (test)data on mobility of the substance available.

Cryolite (13775-53-6)	
Partition coefficient n-octanol/water (Log Koc)	2.8 – 3.8 (log Koc, Other, Experimental value)
Ecology - soil	Low potential for mobility in soil. Toxic to soil organisms.

12.5. Results of PBT and vPvB assessment

CROMAROD® 625
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
Manganese (Mn) (7439-96-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Iron (7439-89-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Titanium dioxide (13463-67-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Nickel (Ni) (7440-02-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Chromium (7440-47-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
limestone powder (1317-65-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Cryolite (13775-53-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Spent fume extraction filters shall be disposed of as dangerous waste.

European List of Waste (LoW) code : 12 01 13 - welding wastes

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Inland waterway transport
Not applicable

Rail transport
Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:		
Reference code	Applicable on	Entry title or description
40.	Silicon (Si)	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Other information, restriction and prohibition regulations : A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3

Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Sol. 2	Flammable solids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H228	Flammable solid.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

The classification complies with : ATP 12

SDS_EU Style

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.