

SIDRA WASSERCHEMIE GmbH  
49479 Ibbenbüren

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

### 1.1 Product identifier

**Ferrous-(II)-chloride, solution**

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

#### 1.2.1 Relevant uses

Flocculation- and precipitating agent

#### 1.2.2 Uses advised against

None known.

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

#### Company

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#### Address enquiries to

#### Technical information

[info@sidra.de](mailto:info@sidra.de)

#### Safety Data Sheet

[sdb@chemiebuero.de](mailto:sdb@chemiebuero.de)

### 1.4 Emergency telephone number

#### Advisory body

+49 (0)89-19240 (24h) (English)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

Met. Corr. 1: H290 May be corrosive to metals.  
Acute Tox. 4: H302 Harmful if swallowed.  
Skin Sens. 1: H317 May cause an allergic skin reaction.  
Eye Dam. 1: H318 Causes serious eye damage.

### 2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

#### Hazard pictograms



#### Signal word

DANGER

#### Contains:

Ferrous (II)-chloride

Nickel dichloride

#### Hazard statements

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.

#### Precautionary statements

P280 Wear protective gloves / eye protection / face protection.  
P301+P312 IF SWALLOWED: Call a POISON CENTER / doctor if you feel unwell.  
P302+P352 IF ON SKIN: Wash with plenty of water / soap.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER / doctor.  
P501 Dispose of contents/container in accordance with local/national regulation.

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## 2.3 Other hazards

Physico-chemical hazards	Corrosive to metals.
Human health dangers	Frequent persistent contact with the skin can cause skin irritation. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Environmental hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other hazards	Further hazards were not determined with the current level of knowledge.

## SECTION 3: Composition / Information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

The product is a mixture.

Range [%]	Substance
20 - <= 35	Ferrous (II)-chloride CAS: 7758-94-3, EINECS/ELINCS: 231-843-4, Reg-No.: 01-2119498060-41-XXXX GHS/CLP: Acute Tox. 4: H302 - Eye Dam. 1: H318 - Met. Corr. 1: H290
1 - < 10	Hydrochloric acid CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X, Reg-No.: 01-2119484862-27-XXXX GHS/CLP: Skin Corr. 1A: H314 - Eye Dam. 1: H318 - STOT SE 3: H335 - Met. Corr. 1: H290 SCL [%]: >=10: STOT SE 3: H335, >=25: Skin Corr. 1B: H314, 10 - <25: Eye Irrit. 2: H319, 10 - <25: Skin Irrit. 2: H315
0.01 - < 0.012	Nickel dichloride CAS: 7718-54-9, EINECS/ELINCS: 231-743-0, EU-INDEX: 028-011-00-6 GHS/CLP: Carc. 1A: H350 - Muta. 2: H341 - Repr. 1B: H360D - Acute Tox. 3: H301 H331 - STOT RE 1: H372 - Skin Irrit. 2: H315 - Resp. Sens. 1: H334 - Skin Sens. 1: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 1, M-Factor (chronic): 1 SCL [%]: >= 0.01: Skin Sens. 1: H317, >= 20: Skin Irrit. 2: H315, 0.1 - <1: STOT RE 2: H373, >= 1: STOT RE 1: H372

Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%. For full text of H-statements: see SECTION 16.
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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information	Take off contaminated clothing and wash before reuse.
Inhalation	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
Skin contact	When in contact with the skin, clean with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.
Ingestion	Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Get medical advice.

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

Irritant effects  
Risk of serious damage to eyes.  
Allergic reactions

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

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media	Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.
Extinguishing media that must not be used	Full water jet.

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

In the event of fire the following can be released:  
Hydrogen chloride (HCl).

#### 5.3 Advice for firefighters

Use self-contained breathing apparatus.  
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

### SECTION 6: Accidental release measures

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

Ensure adequate ventilation.  
Use personal protective equipment (protective gloves, safety glasses, protective clothing).  
High risk of slipping due to leakage/spillage of product.

#### 6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).  
Do not discharge into the drains/surface waters/groundwater.

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

Vacuum up spilled product.  
Take up with absorbent material (e.g. acid binder).  
Dispose of absorbed material in accordance within the regulations.  
Rinse away small amounts with water.

#### 6.4 Reference to other sections

See SECTION 8+13

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Use only in well-ventilated areas.  
The normal safety precautions for handling chemicals must be observed.  
Avoid contact with eyes and skin. Use personal protective equipment.  
The product is not combustible.  
Take off contaminated clothing and wash before reuse.  
Do not eat, drink, smoke or take drugs at work.  
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.  
Use barrier skin cream.

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## 7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Provide acid-resistant floor.

Do not store with alkalis.

Do not store together with metals.

Do not store together with food and animal food/diet.

Keep container in a well-ventilated place.

Keep container tightly closed.

## 7.3 Specific end use(s)

See product use, SECTION 1.2

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## SECTION 8: Exposure controls / personal protection

### 8.1 Control parameters

#### Ingredients with occupational exposure limits to be monitored (GB)

Substance
Hydrochloric acid
CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X, Reg-No.: 01-2119484862-27-XXXX
Long-term exposure: 1 ppm, 2 mg/m <sup>3</sup> , gas and aerosol mists
Short-term exposure (15-minute): 5 ppm, 8 mg/m <sup>3</sup>
Nickel dichloride
CAS: 7718-54-9, EINECS/ELINCS: 231-743-0, EU-INDEX: 028-011-00-6
Long-term exposure: 0,1 mg/m <sup>3</sup> , water-soluble nickel compounds (as Ni), Sk (as Ni) Sk, Carc

#### Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Hydrochloric acid
CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X, Reg-No.: 01-2119484862-27-XXXX
Eight hours: 5 ppm, 8 mg/m <sup>3</sup>
Short-term (15-minute): 10 ppm, 15 mg/m <sup>3</sup>

#### DNEL

Substance
Hydrochloric acid, CAS: 7647-01-0
Industrial, inhalative, Long-term - local effects, 8 mg/m <sup>3</sup>
Industrial, inhalative, Acute - local effects, 15 mg/m <sup>3</sup>
general population, inhalative, Acute - local effects, 15 mg/m <sup>3</sup>
general population, inhalative, Long-term - local effects, 8 mg/m <sup>3</sup>
Ferrous (II)-chloride, CAS: 7758-94-3
Industrial, inhalative, Long-term - systemic effects, 0.2 mg/m <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 2.8 mg/kg bw/day
general population, oral, Acute - local effects, 20 mg/kg bw/day
general population, oral, Long-term - systemic effects, 0.28 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 1.4 mg/kg bw/day

#### PNEC

Substance
Hydrochloric acid, CAS: 7647-01-0
sewage treatment plants (STP), 0.036 mg/l
seawater, 0.036 mg/l
freshwater, 0.036 mg/l
Ferrous (II)-chloride, CAS: 7758-94-3
sediment (seawater), 9.03 mg/kg
sediment (freshwater), 18.07 mg/kg
sewage treatment plants (STP), 737 mg/L
seawater, 57 µg/L
freshwater, 114 µg/L

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## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Tightly fitting goggles. (EN 166:2001) safety glasses (EN 166:2001)
<b>Hand protection</b>	0.7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
<b>Skin protection</b>	Acid-resistant protective clothing (EN 340)
<b>Other</b>	Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
<b>Respiratory protection</b>	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, combination filter E-P2 (DIN EN 14387)
<b>Thermal hazards</b>	none
<b>Delimitation and monitoring of the environmental exposition</b>	Protect the environment by applying appropriate control measures to prevent or limit emissions.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	liquid
<b>Color</b>	dark green
<b>Odor</b>	characteristic
<b>Odour threshold</b>	No information available.
<b>pH-value</b>	< 1
<b>pH-value [1%]</b>	No information available.
<b>Boiling point [°C]</b>	No information available.
<b>Flash point [°C]</b>	not applicable
<b>Flammability (solid, gas) [°C]</b>	not applicable
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Oxidising properties</b>	no
<b>Vapour pressure/gas pressure [kPa]</b>	No information available.
<b>Density [g/cm³]</b>	1.20 - 1.35 (20 °C / 68,0 °F)
<b>Relative density</b>	No information available.
<b>Bulk density [kg/m³]</b>	not applicable
<b>Solubility in water</b>	miscible
<b>Solubility other solvents</b>	No information available.
<b>Partition coefficient [n-octanol/water]</b>	not applicable
<b>Kinematic viscosity</b>	No information available.
<b>Relative vapour density</b>	No information available.
<b>Evaporation speed</b>	No information available.
<b>Melting point [°C]</b>	No information available.
<b>Auto-ignition temperature</b>	not applicable
<b>Decomposition temperature [°C]</b>	No information available.
<b>Particle characteristics</b>	not applicable

### 9.2 Other information

Dynamic viscosity: 20 mPa\*s (20 °C).

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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No dangerous reactions known if used as directed.

### **10.2 Chemical stability**

The product is stable under standard conditions.

### **10.3 Possibility of hazardous reactions**

Reactions with alkalies (lyes).

Reactions with reducing agents.

Reactions with metals, with evolution of hydrogen.

### **10.4 Conditions to avoid**

See SECTION 7.2.

### **10.5 Incompatible materials**

Corrosive to metals.

### **10.6 Hazardous decomposition products**

Hydrogen chloride (HCl).

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## SECTION 11: Toxicological information

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

#### Acute oral toxicity

Product
ATE-mix, oral, 1400 - < 2000 mg/kg
Substance
Nickel dichloride, CAS: 7718-54-9
LD50, oral, Rat, 175 - 500 mg/kg
LD50, oral, Rat, 186 mg/kg (IUCLID)
Ferrous (II)-chloride, CAS: 7758-94-3
LD50, oral, Rat (female), 500 mg/kg bw

#### Acute dermal toxicity

Product
ATE-mix, dermal, > 2000 mg/kg
Substance
Ferrous (II)-chloride, CAS: 7758-94-3
LD50, dermal, Rat, > 2000 mg/kg bw

#### Acute inhalational toxicity

Product
ATE-mix, inhalativ (mist), > 5 mg/l 4h
Substance
Hydrochloric acid, CAS: 7647-01-0
LC50, inhalativ (mist), Rat, 8.3 mg/l/30min
LC50, inhalativ (mist), Rat, 45.6 mg/l/5min
LC50, inhalativ (gas), Rat, 4701 ppm/30min
LC50, inhalativ (gas), Rat, 40989 ppm/5min
LC50, inhalative, Rabbit, 4.2 - 4.7 mg/l 1h
Ferrous (II)-chloride, CAS: 7758-94-3
Discriminating conc. 1100 mg/m³, no adverse effect observed

#### Serious eye damage/irritation

Risk of serious damage to eyes.  
Based on the available information, the classification criteria are fulfilled.

Substance
Nickel dichloride, CAS: 7718-54-9
no adverse effect observed
Hydrochloric acid, CAS: 7647-01-0
in vivo, OECD 437, corrosive
Ferrous (II)-chloride, CAS: 7758-94-3
Eye, Rabbit, OECD 405, Can cause irreversible damage to the eyes.

#### Skin corrosion/irritation

Based on the available information, the classification criteria are not fulfilled.  
No classification due to substance-specific concentration limits.

Substance
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Nickel dichloride, CAS: 7718-54-9
adverse effect observed
Hydrochloric acid, CAS: 7647-01-0
Reconstituted human epidermis model, in vitro / ex vivo, OECD 431, corrosive
Ferrous (II)-chloride, CAS: 7758-94-3
dermal, Rabbit, OECD 404, non-irritating

**Respiratory or skin sensitisation**

May cause an allergic skin reaction.  
Based on the available information, the classification criteria are fulfilled.  
Classification was carried out based on substance-specific concentration limits.

Substance
Nickel dichloride, CAS: 7718-54-9
dermal, adverse effect observed
inhalative, adverse effect observed
Hydrochloric acid, CAS: 7647-01-0
mouse, in vivo (non-LLNA), OECD 406, non-sensitizing
Ferrous (II)-chloride, CAS: 7758-94-3
dermal, Rat, non-sensitizing

**Specific target organ toxicity —  
single exposure**

Based on the available information, the classification criteria are not fulfilled.  
No classification due to substance-specific concentration limits.

Substance
Ferrous (II)-chloride, CAS: 7758-94-3
inhalative, no adverse effect observed

**Specific target organ toxicity —  
repeated exposure**

Based on the available information, the classification criteria are not fulfilled.

Substance
Nickel dichloride, CAS: 7718-54-9
NOAEL, oral, 10 mg Ni sulphate hexahydrate/kg bw/day
NOAEC, inhalative, 0.12 mg Ni sulphate hexahydrate/m³ air
LOAEC, inhalative, 0.25 mg Ni sulphate hexahydrate/m³
Hydrochloric acid, CAS: 7647-01-0
NOAEC, inhalative, Rat, 30 mg/m³, OECD 413, negativ
Ferrous (II)-chloride, CAS: 7758-94-3
NOAEL, oral, Rat, 125 mg/kg bw/day, no adverse effect observed

**Mutagenicity**

Based on the available information, the classification criteria are not fulfilled.

Substance
Nickel dichloride, CAS: 7718-54-9
Chinese hamster, in vitro cytogenicity / chromosome aberration stud, adverse effect observed
Ferrous (II)-chloride, CAS: 7758-94-3
oral, mouse, OECD 476, negativ
in vitro, OECD 471, negativ

**Reproduction toxicity**

Based on the available information, the classification criteria are not fulfilled.

Substance
Ferrous (II)-chloride, CAS: 7758-94-3
NOAEL, oral, Rat, 200 mg/kg bw/d (Effect on developmental toxicity)

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NOAEL, oral, Rat, 200 mg/kg bw/d (Effect on fertility), no adverse effect observed

#### Carcinogenicity

Based on the available information, the classification criteria are not fulfilled.

Substance
Nickel dichloride, CAS: 7718-54-9
NOAEC, oral, 11 mg Ni/kg/d
NOAEC, inhalative, 0.1 mg Ni/m³
Hydrochloric acid, CAS: 7647-01-0
NOAEC, inhalative, Rat, 15 mg/m³, In vivo study, no adverse effect observed

#### Aspiration hazard

Based on the available information, the classification criteria are not fulfilled.

#### General remarks

Toxicological data of complete product are not available.

### 11.2 Information on other hazards

#### Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### Other information

none

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
Nickel dichloride, CAS: 7718-54-9
LC50, (96h), Brachidanio rerio, > 100 mg/l (IUCLID)
EC50, (48h), Daphnia magna, 6.68 mg/l (IUCLID)
EC50, (72h), Selenastrum capricornutum, 0.66 mg/l (IUCLID)
NOEC, (96h), Brachidanio rerio, 32 mg/l (IUCLID)
NOEC, (72h), Selenastrum capricornutum, 0.1 mg/l (IUCLID)
NOEC, (48h), Daphnia magna, 1.8 mg/l (IUCLID)
Hydrochloric acid, CAS: 7647-01-0
LC50, fish, 20.5 mg/l
Ferrous (II)-chloride, CAS: 7758-94-3
LC50, (96h), Pimephales promelas, 21.8 mg Fe/L
EC50, (48h), Daphnia magna, 9.6 mg Fe/L

### 12.2 Persistence and degradability

#### Behaviour in environment compartments

No information available.

#### Behaviour in sewage plant

The product is used as precipitant and flocculant.

#### Biological degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

not applicable

### 12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

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## 12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

## 12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

None known.

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

### Product

Dispose of as hazardous waste.  
For recycling, consult manufacturer.

### Waste no. (recommended)

060313\*

### Contaminated packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.  
Packaging that cannot be cleaned should be disposed of as for product.

### Waste no. (recommended)

150102  
150110\* packaging containing residues of or contaminated by hazardous substances

# SECTION 14: Transport information

## 14.1 UN number or ID number

Transport by land according to ADR/RID 3264

Inland navigation (ADN) 3264

Marine transport in accordance with IMDG 3264

Air transport in accordance with IATA 3264

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#### 14.2 UN proper shipping name

**Transport by land according to ADR/RID** Corrosive liquid, acidic, inorganic, n.o.s. (Ferric (II) chloride, Hydrochloric acid, solution)

- Classification Code

C1

- Label



- ADR LQ

5 I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 3 (E)

**Inland navigation (ADN)**

Corrosive liquid, acidic, inorganic, n.o.s. (Ferric (II) chloride, Hydrochloric acid, solution)

- Classification Code

C1

- Label



**Marine transport in accordance with IMDG**

Corrosive liquid, acidic, inorganic, n.o.s. (Ferric (II) chloride, Hydrochloric acid, solution)

- EMS

F-A, S-B

- Label



- IMDG LQ

5 I

**Air transport in accordance with IATA**

Corrosive liquid, acidic, inorganic, n.o.s. (Ferric (II) chloride, Hydrochloric acid, solution)

- Label



#### 14.3 Transport hazard class(es)

**Transport by land according to ADR/RID** 8

**Inland navigation (ADN)** 8

**Marine transport in accordance with IMDG** 8

**Air transport in accordance with IATA** 8

#### 14.4 Packing group

**Transport by land according to ADR/RID** III

**Inland navigation (ADN)** III

**Marine transport in accordance with IMDG** III

**Air transport in accordance with IATA** III

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#### 14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

#### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

#### 14.7 Maritime transport in bulk according to IMO instruments

No information available.

### SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC; 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	0 %

#### 15.2 Chemical safety assessment

not applicable

### SECTION 16: Other information

#### 16.1 Hazard statements (SECTION 3)

H410 Very toxic to aquatic life with long lasting effects.  
H400 Very toxic to aquatic life.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H315 Causes skin irritation.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H301+H331 Toxic if swallowed or if inhaled.  
H360D May damage the unborn child.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H302 Harmful if swallowed.  
  
H290 May be corrosive to metals.  
H335 May cause respiratory irritation.  
H318 Causes serious eye damage.  
H314 Causes severe skin burns and eye damage.

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## 16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
ATE = acute toxicity estimate  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging  
DMEL = Derived Minimum Effect Level  
DNEL = Derived No Effect Level  
EC50 = Median effective concentration  
ECB = European Chemicals Bureau  
EEC = European Economic Community  
EINECS = European Inventory of Existing Commercial Chemical Substances  
EL50 = Median effective loading  
ELINCS = European List of Notified Chemical Substances  
EmS = Emergency Schedules  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IC50 = Inhibition concentration, 50%  
IMDG = International Maritime Code for Dangerous Goods  
IUCLID = International Uniform Chemical Information Database  
IVIS = In vitro irritation score  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
LC0 = lethal concentration, 0%  
LOAEL = lowest-observed-adverse-effect level  
LL50 = Median lethal loading  
LQ = Limited Quantities  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
NOAEL = No Observed Adverse Effect Level  
NOEC = No Observed Effect Concentration  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
STP = Sewage Treatment Plant  
TLV®/TWA = Threshold limit value – time-weighted average  
TLV®STEL = Threshold limit value – short-time exposure limit  
VOC = Volatile Organic Compounds  
vPvB = very Persistent and very Bioaccumulative

## 16.3 Other information

### Classification procedure

Met. Corr. 1: H290 May be corrosive to metals. (Calculation method)  
Acute Tox. 4: H302 Harmful if swallowed. (Calculation method)  
Skin Sens. 1: H317 May cause an allergic skin reaction. (Expert judgement)  
Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)

### Modified position

SECTION 12 been added: Based on all available information not to be classified as PBT or vPvB respectively.



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