Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice

Iron(III) chloride ≥98,5 %, extra pure, anhydrous

article number: **5192**
Version: **GHS 7.0 en**
Replaces version of: 2023-09-21
Version: (GHS 6)

date of compilation: 2016-11-30
Revision: 2024-03-02

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

1.1 Product identifier

Identification of the substance	**Iron(III) chloride** ≥98,5 %, extra pure, anhydrous
Article number	5192
CAS number	7705-08-0

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

Relevant identified uses:	Laboratory chemical Laboratory and analytical use Formulation [mixing] of preparations and/or re-packaging (excluding alloys) Intermediate Industrial uses Professional uses
Uses advised against:	Do not use for private purposes (household). Food, drink and animal feedingstuffs.

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone:+49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet:	Department Health, Safety and Environment
e-mail (competent person):	**sicherheit@carlroth.de**

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 West-mead, NSW	131126	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
2.16	Substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.1O	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.4S	Skin sensitisation	1	Skin Sens. 1	H317

For full text of abbreviations: see SECTION 16

2.2 Label elements

Labelling

Signal word **Danger**

Pictograms

GHS05, GHS07

Hazard statements

H290 May be corrosive to metals
H302 Harmful if swallowed
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H318 Causes serious eye damage

Precautionary statements

Precautionary statements - prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P280 Wear protective gloves

Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P390 Absorb spillage to prevent material damage

Precautionary statements - disposal

P501 Dispose of contents/container to industrial combustion plant

Hazardous ingredients for labelling: Nickel dichloride

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Iron(III) chloride
Molecular formula	FeCl3
Molar mass	162.2 $^{g}/_{mol}$
CAS No	7705-08-0

Impurities/additives/constituents:

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits
Nickel dichloride	CAS No 7718-54-9	< 0.1	Acute Tox. 3 / H301 Acute Tox. 3 / H331 Skin Irrit. 2 / H315 Resp. Sens. 1 / H334 Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 1A / H350i Repr. 1B / H360D STOT RE 1 / H372			Skin Irrit. 2; H315: C ≥ 20 % Skin Sens. 1; H317: C ≥ 0.01 % STOT RE 1; H372: C ≥ 1 % STOT RE 2; H373: 0.1 % ≤ C < 1 %

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician. In case of skin irritation, consult a physician.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion

Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately. Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation: Irritation,
Following skin contact: Allergic reactions, Corrosion,
After eye contact: Risk of serious damage to eyes, Risk of blindness,
Following ingestion: Vomiting, Gastric perforation

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

In case of fire may be liberated:

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically. Control of dust.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use extractor hood (laboratory). Avoid dust formation.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [mg/m³]	STEL [mg/m³]	Ceiling-C [mg/m³]	Notation	Source
AU	nickel dichloride	7718-54-9	WES	0.1				WES

Notation

Ceiling-C	Ceiling value is a limit value above which exposure should not occur
STEL	Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Human health values

Relevant DNELs and other threshold levels

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	2.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Nickel dichloride	7718-54-9	DNEL	50 µg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Nickel dichloride	7718-54-9	DNEL	12.8 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Nickel dichloride	7718-54-9	DNEL	50 µg/m³	human, inhalatory	worker (industry)	chronic - local effects
Nickel dichloride	7718-54-9	DNEL	1.6 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Nickel dichloride	7718-54-9	DNEL	0.44 µg/cm²	human, dermal	worker (industry)	chronic - local effects

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Nickel dichloride	7718-54-9	PNEC	7.1 µg/l	aquatic organisms	freshwater	short-term (single instance)
Nickel dichloride	7718-54-9	PNEC	8.6 µg/l	aquatic organisms	marine water	short-term (single instance)
Nickel dichloride	7718-54-9	PNEC	0.33 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Nickel dichloride	7718-54-9	PNEC	109 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Nickel dichloride	7718-54-9	PNEC	109 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Nickel dichloride	7718-54-9	PNEC	29.9 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

• material thickness

>0,11 mm

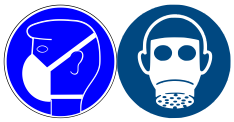
• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	powder, crystalline
Colour	dark brown
Odour	pungent
Melting point/freezing point	306 °C (ECHA)
Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined

Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	480 °C (ECHA)
pH (value)	1 (in aqueous solution: 200 $^{g}/_{l}$, 20 °C)
Kinematic viscosity	not relevant
Solubility(ies)	
Water solubility	920 $^{g}/_{l}$ at 20 °C
Partition coefficient	
Partition coefficient n-octanol/water (log value):	-4 (24 °C)
Vapour pressure	1 hPa at 20 °C
Density and/or relative density	
Density	3.65 $^{g}/_{cm^3}$ (ECHA)
Relative vapour density	Information on this property is not available.
Bulk density	1,000 $^{kg}/_{m^3}$
Particle characteristics	No data available.
Other safety parameters	
Oxidising properties	none

9.2 Other information

Information with regard to physical hazard classes:	
Corrosive to metals	category 1: corrosive to metals
Other safety characteristics:	There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

It's a reactive substance. Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Strong alkali

10.4 Conditions to avoid

Keep away from heat. Decompostion takes place from temperatures above: 480 °C.

10.5 Incompatible materials

different metals

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4. May be harmful in contact with skin.

Acute toxicity

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	500 $^{mg}/_{kg}$	rat		ECHA
dermal	LD50	>2,000 $^{mg}/_{kg}$	rat		ECHA

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
Nickel dichloride	7718-54-9	oral	200 $^{mg}/_{kg}$
Nickel dichloride	7718-54-9	inhalation: dust/mist	0.593 $^{mg}/_{l}$/4h

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Nickel dichloride	7718-54-9	oral	LD50	200 $^{mg}/_{kg}$	rat
Nickel dichloride	7718-54-9	inhalation: dust/mist	LC50	0.593 $^{mg}/_{l}$/4h	rat

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting, severe abdominal pain

• If in eyes

Causes serious eye damage, risk of blindness

• If inhaled

cough, pain, choking, and breathing difficulties

• If on skin

causes skin irritation, May produce an allergic reaction, pruritis, localised redness

• Other information

none

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components

Name of sub-stance	CAS No	Endpoint	Value	Species	Exposure time
Nickel dichloride	7718-54-9	LC50	15.3 $^{mg}/_{l}$	fish	96 h
Nickel dichloride	7718-54-9	EC50	685.8 $^{µg}/_{l}$	aquatic invertebrates	48 h
Nickel dichloride	7718-54-9	ErC50	≤1,120 $^{µg}/_{l}$	algae	72 h

Aquatic toxicity (chronic) of components

Name of sub-stance	CAS No	Endpoint	Value	Species	Exposure time
Nickel dichloride	7718-54-9	ErC50	8,363 $^{µg}/_{l}$	fish	40 d
Nickel dichloride	7718-54-9	LC50	204 $^{µg}/_{l}$	aquatic invertebrates	21 d
Nickel dichloride	7718-54-9	EbC50	6.2 $^{µg}/_{l}$	aquatic invertebrates	30 d
Nickel dichloride	7718-54-9	EC50	≤108 $^{µg}/_{l}$	aquatic invertebrates	21 d

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	-4 (24 °C)

Bioaccumulative potential of components

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Nickel dichloride	7718-54-9	86		

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H8 Corrosives

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

UN RTDG	UN 1773
IMDG-Code	UN 1773
ICAO-TI	UN 1773

14.2 UN proper shipping name

UN RTDG	FERRIC CHLORIDE, ANHYDROUS
IMDG-Code	FERRIC CHLORIDE, ANHYDROUS
ICAO-TI	Ferric chloride, anhydrous

14.3 Transport hazard class(es)

UN RTDG	8
IMDG-Code	8
ICAO-TI	8

14.4 Packing group

UN RTDG	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport informationNational regulationsAdditional information(UN RTDG)

UN number	1773
Class	8
Packing group	III
Danger label(s)	8

Special provisions (SP)	- UN RTDG
Excepted quantities (EQ)	E1 UN RTDG
Limited quantities (LQ)	5 kg UN RTDG

Emergency Action Code	2X

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name	FERRIC CHLORIDE, ANHYDROUS
Particulars in the shipper's declaration	UN1773, FERRIC CHLORIDE, ANHYDROUS, 8, III
Marine pollutant	-
Danger label(s)	8

Special provisions (SP)	-
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-B
Stowage category	A
Segregation group	1 - Acids

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name	Ferric chloride, anhydrous
Particulars in the shipper's declaration	UN1773, Ferric chloride, anhydrous, 8, III
Danger label(s)	8

Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg

SECTION 15: Regulatory information

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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

Substance is listed.

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)
VN	NCI	all ingredients are listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.3	Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EbC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
Muta.	Germ cell mutagenicity
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
Repr.	Reproductive toxicity

Abbr.	Descriptions of used abbreviations
Resp. Sens.	Respiratory sensitisation
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.