acc. to Safe Work Australia - Code of Practice

Tin(II)chloride dihydrate ≥98%, p.a., ACS

article number: **4977**Version: **GHS 3.0 en**date of compilation: 2016-05-17
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Version: (GHS 2)

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

1.1 Product identifier

Identification of the substance Tin(II)chloride dihydrate ≥98%, p.a., ACS

Article number 4977

CAS number 10025-69-1

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for squirting or spraying. Do not use

for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. 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
Department Health, Safety and Environment

sheet:

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

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| Section | Hazard class | Cat- egory | Hazard class and category | Hazard statement |
|---------|--|---------------|---------------------------|---------------------|
| 2.16 | Substance or mixture corrosive to metals | 1 | Met. Corr. 1 | H290 |
| 3.10 | Acute toxicity (oral) | 4 | Acute Tox. 4 | H302 |
| 3.1I | Acute toxicity (inhal.) | | Acute Tox. 4 | H332 |
| 3.2 | Skin corrosion/irritation | 1B | Skin Corr. 1B | H314 |
| 3.3 | Serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |
| 3.45 | Skin sensitisation | | Skin Sens. 1 | H317 |
| 3.8R | 3.8R Specific target organ toxicity - single exposure (respiratory tract irritation) | | STOT SE 3 | H335 |
| 3.9 | Specific target organ toxicity - repeated exposure | 2 | STOT RE 2 | H373 |

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS05, GHS07, GHS08







Hazard statements

H290 May be corrosive to metals

H302+H332 Harmful if swallowed or if inhaled

H314 Causes severe skin burns and eye damage H317 May cause an allergic skin reaction

H335 May cause respiratory irritation

H373 May cause damage to organs (cardiovascular system) through prolonged or re-

peated exposure (if swallowed)

Precautionary statements

Precautionary statements - prevention

P260 Do not breathe dusts or mists P280 Wear eye protection/face protection

Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin

with water or shower

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

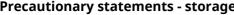
lenses, if present and easy to do. Continue rinsing

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2.3

SECTION 3: Composition/information on ingredients

3.1 **Substances**

Tin(II)chloride dihydrate Name of substance

Molecular formula Cl₂Sn · 2 H₂O Molar mass 225.6 g/_{mol} 10025-69-1 CAS No

SECTION 4: First aid measures

Description of first aid measures 4.1



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

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

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure. In case of skin reactions, 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. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

4.2 Most important symptoms and effects, both acute and delayed

Corrosion, Vomiting, Risk of blindness, Gastric perforation, Risk of serious damage to eyes, Irritation, Allergic reactions, Cough, Dyspnoea

Indication of any immediate medical attention and special treatment needed 4.3

none

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Precautionary statements - storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed

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 $\geq 0.1\%$.

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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: Hydrogen chloride (HCl)

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.

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.

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SECTION 7: Handling and storage

Precautions for safe handling

Handle and open container with care. Provision of sufficient ventilation. Avoid dust formation. Clear contaminated areas thoroughly.

Measures to prevent fire as well as aerosol and dust generation

Removal of dust deposits.

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. Keep container tightly closed. Hygroscopic solid.

Incompatible substances or mixtures

Observe hints for combined storage.

Protect against external exposure, such as

humidity, contact with air/oxygen

Consideration of other advice:

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted. Use local and general ventilation.

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)

| Coun try | Name of agent | CAS No | Identifi- er | TWA [mg/ m³] | STEL [mg/ m³] | Ceil- ing-C [mg/ m³] | Nota- tion | Source |
|-------------|----------------|--------|-----------------|--------------------|---------------------|-------------------------------|---------------|--------|
| AU | nuisance dusts | | WES | 10 | | | i | WES |

Notation

TWA

Ceiling-C Ceiling value is a limit value above which exposure should not occur

Inhalable fraction 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)
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)

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Human health values

| Relevant DNELs and other threshold levels | | | | | |
|---|------------------------|------------------------------------|-------------------|----------------------------|--|
| Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time | |
| DNEL | 1 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects | |
| DNEL | 2.01 mg/m ³ | human, inhalatory | worker (industry) | acute - systemic effects | |
| DNEL | 12.84 mg/m³ | human, inhalatory | worker (industry) | acute - local effects | |
| DNEL | 0.34 mg/kg bw/ day | human, dermal | worker (industry) | chronic - systemic effects | |
| DNEL | 0.69 mg/kg bw/ | human, dermal | worker (industry) | acute - systemic effects | |

Environmental values

| Relevant PNECs and other threshold levels | | | | | | |
|---|-------------------------------------|-------------------|--------------------------------|------------------------------|--|--|
| End- point | Threshold level | Organism | Environmental com- partment | Exposure time | | |
| PNEC | 0.8 ^{mg} / _l | aquatic organisms | freshwater | short-term (single instance) | | |
| PNEC | 51.37 ^{mg} / _{kg} | aquatic organisms | freshwater sediment | short-term (single instance) | | |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection. Wear face protection.

Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. 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)

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>0,3 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
Colour white
Odour odourless

Melting point/freezing point 37 °C at 1,013 hPa (ECHA) Boiling point or initial boiling point and boiling 623 °C at 1,013 hPa (ECHA)

range

Flammability non-combustible
Lower and upper explosion limit not determined
Flash point not applicable
Auto-ignition temperature not determined
Decomposition temperature not relevant

pH (value) 2 (in aqueous solution: $100 \, {}^{9}I_{1}$, $20 \, {}^{\circ}C$)

Kinematic viscosity not relevant

Solubility(ies)

Water solubility 1,187 ^g/_l at 20 °C

Partition coefficient

Partition coefficient n-octanol/water (log value): not relevant (inorganic)

Vapour pressure 3.3 kPa at 429 °C

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Density and/or relative density

Density $2.71 \, \mathrm{g/_{cm^3}}$

Relative vapour density Information on this property is not available.

Bulk density \sim 1,250 kg/ $_{\rm m}$ 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

Moisture-sensitive. Hygroscopic solid.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Ethylene oxide, Hydrazine, Strong alkali, Hydrogen peroxide

10.4 Conditions to avoid

Humidity. Contact with air/oxygen.

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. Harmful if inhaled.

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| Acute toxicity | | | | | |
|---------------------------|----------|-------------------------------------|---------|-----------|----------|
| Exposure route | Endpoint | Value | Species | Method | Source |
| oral | LD50 | 1,910 ^{mg} / _{kg} | rat | anhydrous | OECD 423 |
| oral | LD50 | 2,275 ^{mg} / _{kg} | rat | anhydrous | ECHA |
| inhalation: dust/ mist | LC50 | 2 ^{mg} / _I /4h | monkey | anhydrous | OECD 436 |

Skin corrosion/irritation

Causes severe skin burns and eye damage.

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

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

May cause damage to organs (cardiovascular system) through prolonged or repeated exposure (if swallowed).

| Hazard category | Target organ | Exposure route |
|-----------------|-----------------------|----------------|
| 2 | cardiovascular system | if swallowed |

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

• If inhaled

Irritation to respiratory tract, cough, Dyspnoea

• If on skin

causes severe burns, causes poorly healing wounds, May produce an allergic reaction, pruritis, localised redness

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Other information

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

| Aquatic toxicity (acute) | | | | | |
|--------------------------|---------------------------------|---------|--------|------------------|--|
| Endpoint | Value | Species | Source | Exposure time | |
| LC50 | 50 ^{mg} / _l | fish | ECHA | 96 h | |

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

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.

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Other adverse effects: Cardiovascular system

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

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Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H8 Corrosives

H11 Toxic (Delayed or chronic)

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 | 14.1 | Ιl | JN | l n | uı | nk | er |
|----------------|------|----|----|-----|----|----|----|
|----------------|------|----|----|-----|----|----|----|

UN 3260
IMDG-Code UN 3260
ICAO-TI UN 3260

14.2 UN proper shipping name

UN RTDG CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. IMDG-Code CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

ICAO-TI Corrosive solid, acidic, inorganic, n.o.s.

Technical name Tin(II)chloride dihydrate

14.3 Transport hazard class(es)

UN RTDG 8
IMDG-Code 8
ICAO-TI 8

14.4 Packing group

UN RTDG II
IMDG-Code II
ICAO-TI II

14.5 Environmental hazards non-environmentally hazardous acc. to the dan-

gerous 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

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Transport informationNational regulationsAdditional information(UN RTDG)

UN number 3260
Class 8
Packing group II
Danger label(s) 8

Special provisions (SP) 274

UN RTDG

Excepted quantities (EQ) E2

UN RTDG

Limited quantities (LQ) 1 kg

1 kg UN RTDG

Emergency Action Code 2X

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Particulars in the shipper's declaration UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC,

N.O.S., (Tin(II)chloride dihydrate), 8, II

Marine pollutant -

Danger label(s) 8

Special provisions (SP) 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 kg

EmS F-A, S-B

Stowage category B

Segregation group 1 - Acids

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

Proper shipping name Corrosive solid, acidic, inorganic, n.o.s.

Particulars in the shipper's declaration UN3260, Corrosive solid, acidic, inorganic, n.o.s.,

(Tin(II)chloride dihydrate), 8, II

Danger label(s) 8



Special provisions (SP)

Excepted quantities (EQ)

Limited quantities (LQ)

5 kg

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SECTION 15: Regulatory information

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 | substance is listed |
| CN | IECSC | substance is listed |
| EU | ECSI | substance is listed |
| EU | REACH Reg. | substance is listed |
| JP | CSCL-ENCS | substance is listed |
| KR | KECI | substance is listed |
| MX | INSQ | substance is listed |
| NZ | NZIoC | substance is listed |
| PH | PICCS | substance is listed |
| TR | CICR | substance is listed |
| TW | TCSI | substance is listed |
| VN | NCI | substance is listed |

Legend

Australian Inventory of Industrial Chemicals
Chemical Inventory and Control Regulation
List of Existing and New Chemical Substances (CSCL-ENCS)
EC Substance Inventory (EINECS, ELINCS, NLP)
Inventory of Existing Chemical Substances Produced or Imported in China
National Inventory of Chemical Substances AIIC CICR CSCL-ENCS ECSI IECSC

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

15.2 Chemical Safety Assessment

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

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SECTION 16: Other information

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety- relev- ant |
|---------|---------------------------|---|--------------------------|
| 2.3 | | Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%. | yes |
| 14.8 | | Emergency Action Code: 2X | yes |
| 15.1 | | 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. | yes |
| 15.1 | | National inventories: change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|-----------|---|
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| ED | Endocrine disruptor |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| 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 |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |

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| Abbr. | Descriptions of used abbreviations |
|---------|---|
| STEL | Short-term exposure limit |
| 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. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs (cardiovascular system) through prolonged or repeated exposure (if swallowed). |

Disclaimer

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

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