Safety data sheet

acc. to Safe Work Australia - Code of Practice

Chloral hydrate ≥98,5 %, Ph.Eur., BP

article number: **K318**
Version: **GHS 3.0 en**
Replaces version of: 2021-03-03
Version: (GHS 2)

date of compilation: 2016-12-01
Revision: 2024-03-02

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

1.1 Product identifier

Identification of the substance	**Chloral hydrate** ≥98,5 %, Ph.Eur., BP
Article number	K318
CAS number	302-17-0
Alternative name(s)	2,2,2-trichloroethane-1,1-diol

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 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
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	2	Eye Irrit. 2	H319

For full text of abbreviations: see SECTION 16

2.2 Label elements

Labelling

Signal word **Warning**

Pictograms

GHS07

Hazard statements

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation

Precautionary statements

Precautionary statements - prevention

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
P321	Specific treatment (see on this label)
P337+P313	If eye irritation persists: Get medical advice/attention

Precautionary statements - disposal

P501	Dispose of contents/container to industrial combustion plant

2.3 Other hazards

This material is combustible, but will not ignite readily.

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	Chloral hydrate
Molecular formula	$C_2H_3Cl_3O_2$
Molar mass	165.4 $^{g}/_{mol}$
CAS No	302-17-0

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off 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. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulties, Unconsciousness, Vomiting, Nausea, Irritation

4.3 Indication of any immediate medical attention and special treatment needed

Give sodium sulfate as laxative (1 tablespoon in 1 glass of water).

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

Combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO_2), 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.

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.

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

Provision of sufficient ventilation. Use extractor hood (laboratory). Avoid dust formation.

Measures to prevent fire as well as aerosol and dust generation

Keep away from sources of ignition - No smoking.

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.

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)

This information is not available.

Human health values

Relevant DNELs and other threshold levels

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	1.716 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	0.973 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Environmental values

Relevant PNECs and other threshold levels

End-point	Threshold level	Organism	Environmental com-partment	Exposure time
PNEC	0.115 $^{mg}/_{l}$	aquatic organisms	freshwater	short-term (single instance)
PNEC	0.011 $^{mg}/_{l}$	aquatic organisms	marine water	short-term (single instance)
PNEC	7.9 $^{mg}/_{l}$	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	0.09 $^{mg}/_{kg}$	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0.009 $^{mg}/_{kg}$	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0.02 $^{mg}/_{kg}$	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

Butyl caoutchouc (butyl rubber)

• material thickness

0,7mm

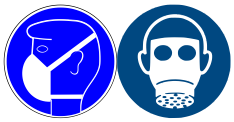
• breakthrough times of the glove material

>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	crystalline
Colour	white
Odour	stinging
Melting point/freezing point	52 °C
Boiling point or initial boiling point and boiling range	97 °C at 1,013 hPa (slow decomposition)
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	75 °C at 973.4 hPa (ECHA)
Auto-ignition temperature	not determined
Decomposition temperature	>97 °C

pH (value)	3.5 – 5.5 (in aqueous solution: 100 $^{g}/_{l}$, 20 °C)
Kinematic viscosity	not relevant
Solubility(ies)	
Water solubility	~ 6,600 $^{g}/_{l}$ at 20 °C
Partition coefficient	
Partition coefficient n-octanol/water (log value):	1.092 (25 °C) (ECHA)
Soil organic carbon/water (log KOC)	0.217 (ECHA)
Vapour pressure	13 hPa at 20 °C
Density and/or relative density	
Density	1.91 $^{g}/_{cm^3}$ at 20 °C
Relative vapour density	5.7 (air = 1)
Particle characteristics	No data available.
Other safety parameters	
Oxidising properties	none

9.2 Other information

Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics:	There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

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, Alkali metals, Alcohols, Bases, Alkaline earth metal, Permanganates

10.4 Conditions to avoid

Keep away from heat. Decompostion takes place from temperatures above: >97 °C.

10.5 Incompatible materials

iron, different plastics

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	479 $^{mg}/_{kg}$	rat		TOXNET
dermal	LD50	3,030 $^{mg}/_{kg}$	rat		TOXNET

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

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, nausea

• If in eyes

Causes serious eye irritation

• If inhaled

Inhalation of dust may cause irritation of the respiratory system

• If on skin

causes skin irritation

• Other information

Other adverse effects: Liver and kidney damage, Cardiac arrhythmias, Dyspnoea, Blood pressure drop, Unconsciousness, Drowsiness

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)

Endpoint	Value	Species	Source	Exposure time
LC50	>100 $^{mg}/_{l}$	fish	ECHA	96 h

Aquatic toxicity (chronic)

Endpoint	Value	Species	Source	Exposure time
EC50	65 $^{mg}/_{l}$	aquatic invertebrates	ECHA	21 d

12.2 Persistence and degradability

Theoretical Oxygen Demand: 0.1935 $^{mg}/_{mg}$
Theoretical Carbon Dioxide: 0.5322 $^{mg}/_{mg}$

Process of degradability

Process	Degradation rate	Time
biotic/abiotic	4 %	14 d
oxygen depletion	44.04 %	28 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	1.092 (25 °C) (ECHA)
BCF	3.162 (ECHA)

12.4 Mobility in soil

Henry's law constant	0 $^{Pa\ m^3}/_{mol}$ at 25 °C (ECHA)
The Organic Carbon normalised adsorption coefficient	0.217 (ECHA)

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

H6.1 Poisonous (Acute)

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 2811
IMDG-Code	UN 2811
ICAO-TI	UN 2811

14.2 UN proper shipping name

UN RTDG	TOXIC SOLID, ORGANIC, N.O.S.
IMDG-Code	TOXIC SOLID, ORGANIC, N.O.S.
ICAO-TI	Toxic solid, organic, n.o.s.
Technical name	Chloral hydrate

14.3 Transport hazard class(es)

UN RTDG	6.1
IMDG-Code	6.1
ICAO-TI	6.1

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	2811
Class	6.1
Packing group	III
Danger label(s)	6.1

Special provisions (SP)	223, 274 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	TOXIC SOLID, ORGANIC, N.O.S.
Particulars in the shipper's declaration	UN2811, TOXIC SOLID, ORGANIC, N.O.S., (Chloral hydrate), 6.1, III
Marine pollutant	-
Danger label(s)	6.1

Special provisions (SP)	223, 274

Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-A
Stowage category	A

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

Proper shipping name	Toxic solid, organic, n.o.s.
Particulars in the shipper's declaration	UN2811, Toxic solid, organic, n.o.s., (Chloral hydrate), 6.1, III
Danger label(s)	6.1

Special provisions (SP)	A3, A5
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 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	substance is listed
CA	DSL	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
JP	ISHA-ENCS	substance is listed
KR	KECI	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed

Country	Inventory	Status
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
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
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
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-relev-ant
1.1	Index No: 605-014-00-6		yes
1.1	EC number: 206-117-5	CAS number: 302-17-0	yes
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Warning		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards: This material is combustible, but will not ignite readily.	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
3.1	Index No: 605-014-00-6		yes
3.1	EC number: 206-117-5		yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
3.1	CAS number: 302-17-0		yes
11.1		Acute toxicity: change in the listing (table)	yes
12.1		Aquatic toxicity (chronic): change in the listing (table)	yes
14.1	UN number: 2811	UN number	yes
14.1		UN RTDG: UN 2811	yes
14.1		IMDG-Code: UN 2811	yes
14.1		ICAO-TI: UN 2811	yes
14.2	UN proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.	UN proper shipping name	yes
14.2		UN RTDG: TOXIC SOLID, ORGANIC, N.O.S.	yes
14.2		IMDG-Code: TOXIC SOLID, ORGANIC, N.O.S.	yes
14.2		ICAO-TI: Toxic solid, organic, n.o.s.	yes
14.3	Transport hazard class(es): class 6.1 hazard - toxic substances	Transport hazard class(es)	yes
14.3	Class: 6.1 (toxic substances)		yes
14.3		UN RTDG: 6.1	yes
14.3		IMDG-Code: 6.1	yes
14.3		ICAO-TI: 6.1	yes
14.4	Packing group: III (substance presenting low danger)	Packing group	yes
14.4		UN RTDG: III	yes
14.4		IMDG-Code: III	yes
14.4		ICAO-TI: III	yes
14.5	Environmental hazards: none (non-environmentally hazardous acc. to the dangerous goods regulations)	Environmental hazards: non-environmentally hazardous acc. to the dangerous goods regulations	yes
14.6	Special precautions for user: Provisions for dangerous goods (ADR) should be complied within the premises.	Special precautions for user: There is no additional information.	yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.8	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)		yes
14.8	UN number: 2811		yes
14.8	Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.		yes
14.8	Particulars in the transport document: UN2811, TOXIC SOLID, ORGANIC, N.O.S., (Chloral hydrate), 6.1, III, (E)		yes
14.8	Class: 6.1		yes
14.8	Classification code: T2		yes
14.8	Packing group: III		yes
14.8	Danger label(s): 6.1		yes
14.8		Danger label(s): change in the listing (table)	yes
14.8	Special provisions (SP): 274, 614, 802(ADN)		yes
14.8	Excepted quantities (EQ): E1		yes
14.8	Limited quantities (LQ): 5 kg		yes
14.8	Transport category (TC): 2		yes
14.8	Tunnel restriction code (TRC): E		yes
14.8	Hazard identification No: 60		yes
14.8	Emergency Action Code: 2X		yes
14.8	UN number: 2811		yes
14.8	Class: 6.1		yes
14.8	Packing group: III		yes
14.8	Acute toxicity: oralLD50479 $^{mg}/_{kg}$ratTOXNET dermalLD503,030 $^{mg}/_{kg}$ratTOXNET	Transport informationNational regulationsAdditional information(UN RTDG)	yes
14.8	Aquatic toxicity (chronic): EC5065 $^{mg}/_{l}$aquatic invertebratesECHA21 d NOEC11.5 $^{mg}/_{l}$aquatic invertebratesECHA21 d	UN number: 2811	yes
14.8		Class: 6.1	yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.8		Packing group: III	yes
14.8		Danger label(s): 6.1	yes
14.8		Danger label(s): change in the listing (table)	yes
14.8		Special provisions (SP): 223, 274 UN RTDG	yes
14.8		Excepted quantities (EQ): E1 UN RTDG	yes
14.8		Limited quantities (LQ): 5 kg UN RTDG	yes
14.8		Emergency Action Code: 2X	yes
14.8	UN number: 2811		yes
14.8	Class: 6.1		yes
14.8	Packing group: III		yes
14.8		Danger label(s): change in the listing (table)	yes
14.8		Danger label(s): change in the listing (table)	yes
15.1	Safety, health and environmental regulations/ legislation specific for the substance or mixture	Safety, health and environmental regulations/ legislation specific for the substance or mixture: There is no additional information.	yes
15.1	National inventories: Substance is listed in the following national inventories:		yes
15.1		National inventories: change in the listing (table)	yes
15.1		National regulations(Australia)	yes
15.1		Australian Inventory of Chemical Substances(AICS): Substance is listed.	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	yes
15.1		National inventories: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
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
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
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative

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
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Disclaimer

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