acc. to Regulation (EC) No. 1907/2006 (REACH)

PCB 27 ROTI®Star

article number: **1TN9** Version: **1.0 en** date of compilation: 2022-09-09

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

1.1 Product identifier

Identification of the substance

Article number

EC number

CAS number

Alternative name(s)

Alternative number(s)

PCB 27 ROTI®Star

1TN9

690-188-6

38444-76-7

Biphenyl, polychlorinated Hydrocarbon, chlorinated

Laboratory and analytical use

Laboratory chemical

sicherheit@carlroth.de

CAS number: 1336-36-3

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

Relevant identified uses:

Uses advised against:

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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):

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture



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Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.9	Specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
4.1A	Hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	Hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

Signal word Warning

Pictograms

GHS08, GHS09



Hazard statements

H373May cause damage to organs through prolonged or repeated exposureH410Very toxic to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P260	Do not breathe dust/fume/gas/mist/vapours/spray
P273	Avoid release to the environment

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

The substance has an endocrine disrupting potential.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	PCB 27
Molecular formula	$C_{12}H_7Cl_3$
Molar mass	257,5 ^g / _{mol}
CAS No	38444-76-7
EC No	690-188-6

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Substance, Specific Conc. Limits, M-factors, ATE				
Specific Conc. Limits	M-Factors	ATE	Exposure route	
STOT RE 2; H373: C ≥ 0,005 %	-	-		

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 all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

- **4.2 Most important symptoms and effects, both acute and delayed** Symptoms and effects are not known to date.
- **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, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen chloride (HCl)

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5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. 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

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

Avoid dust formation.

Measures to protect the environment

Avoid release to the environment.

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 in a cool place.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 2 - 8 °C

7.3 Specific end use(s)

No information available.

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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
GB	polychlorinated biphen- yls (PCB)	1336-36-3	WEL	0,1				EH40/2005

Notation

Ceiling-C STEL 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 15minute 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)

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 consider-able 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

FKM (fluoro rubber)

material thickness

0,4 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

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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). Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/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	colourless
Odour	faintly perceptible
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not applicable
Kinematic viscosity	not relevant
Solubility(ies)	
Water solubility	(practically insoluble)
Partition coefficient	
Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure	not determined
Density and/or relative density	
Density	not determined
Relative vapour density	information on this property is not available



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Particle characteristics	No data available.
Other safety parameters	
Oxidising properties	none
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

9.2

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

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

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

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

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.

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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

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

Data are not available.

• If in eyes

Data are not available.

If inhaled

Data are not available.

• If on skin

Data are not available.

Other information

Irreversible damage to internal organs

11.2 Endocrine disrupting properties

This substance is known as an "endocrine disruptor".

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Biodegradation

Data are not available.

12.2 Process of degradability

Theoretical Oxygen Demand: 1,615 ^{mg}/_{mg} Theoretical Carbon Dioxide: 2,051 ^{mg}/_{mg}

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.



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12.5 Results of PBT and vPvB assessment Data are not available.

- **12.6 Endocrine disrupting properties** This substance is known as an "endocrine disruptor".
- **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. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

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.

SECTION 14: Transport information

14.1 UN number or ID number

	ADRRID	UN 3432
	IMDG-Code	UN 3432
	ICAO-TI	UN 3432
14.2	UN proper shipping name	
	ADRRID	POLYCHLORINATED BIPHENYLS, SOLID
	IMDG-Code	POLYCHLORINATED BIPHENYLS, SOLID
	ICAO-TI	Polychlorinated biphenyls, solid
14.3	Transport hazard class(es)	
	ADRRID	9
	IMDG-Code	9
	ICAO-TI	9
14.4	Packing group	



Safety data sheet Safety data sheet acc. to Regulation (EC) No. 1907/2006 (REACH)

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PCB 2	27 ROTI®Star	
article	e number: 1TN9	
	ADRRID	II
	IMDG-Code	II
	ICAO-TI	II
14.5	Environmental hazards	hazardous to the aquatic environment
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be	complied within the premises.
14.7	Maritime transport in bulk according to IMO i	nstruments
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulat	ions
	Transport of dangerous goods by road, rail and information	d inland waterway (ADR/RID/ADN) - Additional
	Proper shipping name	POLYCHLORINATED BIPHENYLS, SOLID
	Particulars in the transport document	UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, II, (D/E), environmentally hazardous
	Classification code	M2
	Danger label(s)	9, "Fish and tree"
	Environmental hazards	Yes (hazardous to the aquatic environment)
	Special provisions (SP)	305, 802(ADN)
	Excepted quantities (EQ)	E2
	Limited quantities (LQ)	1 kg
	Transport category (TC)	0
	Tunnel restriction code (TRC)	D/E
	Hazard identification No	90
	Emergency Action Code	2X
	Regulations concerning the International Carr information	riage of Dangerous Goods by Rail (RID)Additional
	Classification code	M2
	Danger label(s)	9 Fish and tree
	Environmental hazards	Yes Hazardous to water
	Special provisions (SP)	305, 802(ADN)
	Excepted quantities (EQ)	E2
	Limited quantities (LQ)	1 kg

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Transport category (TC)	0
Hazard identification No	90
International Maritime Dangerous Goods C	Code (IMDG) - Additional information
Proper shipping name	POLYCHLORINATED BIPHENYLS, SOLID
Particulars in the shipper's declaration	UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, II, MARINE POLLUTANT
Marine pollutant	yes (P) (hazardous to the aquatic environment)
Danger label(s)	9, "Fish and tree"
Special provisions (SP)	305, 958
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 kg
EmS	F-A, S-A
Stowage category	A
International Civil Aviation Organization (I	CAO-IATA/DGR) - Additional information
Proper shipping name	Polychlorinated biphenyls, solid
Particulars in the shipper's declaration	UN3432, Polychlorinated biphenyls, solid, 9, II
Environmental hazards	Yes (hazardous to the aquatic environment)
Danger label(s)	9
Special provisions (SP)	A11
Excepted quantities (EQ)	E2

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

2012/	2012/18/EU (Seveso III)					
No	Dangerous substance/hazard categories		Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements			
E1	environmental hazards (hazardous to the aquatic en- vironment, cat. 1)	100	200	56)		

Notation

56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

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Deco-Paint Directive 0 % VOC content

Industrial Emissions Directive (IED)

VOC content	0 %
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Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer **Register (PRTR)**

Pollutant release and transfer registers (PRTR)			
Name of substance	CAS No	Remarks	Threshold for releases to air (kg/year)
PCB 27	1336-36-3		0,1

Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
PCB 27	Dioxins and dioxin-like com- pounds		b)	HAZ (9)
PCB 27	Dioxins and dioxin-like com- pounds		c)	
PCB 27	Organohalogen compounds and substances which may form such compounds in the aquatic envir- onment		a)	
PCB 27	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment		a)	
PCB 27	Persistent hydrocarbons and per- sistent and bioaccumulable or- ganic toxic substances		a)	

Legend (9)

This refers to the following compounds: 7 polychlorinated dibenzo-p-dioxins (PCDDs): 2,3,7,8-T4CDD (CAS 1746-01-6), 1,2,3,7,8-P5CDD (CAS 40321-76-4), 1,2,3,4,7,8-H6CDD (CAS 39227-28-6), 1,2,3,6,7,8-H6CDD (CAS 57653-85-7), 1,2,3,7,8,9-H6CDD (CAS 19408-74-3), 1,2,3,4,6,7,8-H7CDD (CAS 35822-46-9), 1,2,3,4,6,7,8,9-O8CDD (CAS 3268-87-9)

10 polychlorinated dibenzofurans (PCDFs): 2,3,7,8-T4CDF (CAS 51207-31-9), 1,2,3,7,8-P5CDF (CAS 57117-41-6), 2,3,4,7,8-P5CDF (CAS 57117-31-4), 1,2,3,4,7,8-H6CDF (CAS 70648-26-9), 1,2,3,6,7,8-H6CDF (CAS 57117-44-9), 1,2,3,7,8,9-H6CDF (CAS 72918-21-9), 2,3,4,6,7,8-H6CDF (CAS 67562-39-4), 2,3,4,6,7,8-H7CDF (CAS 700-4), 2,3,4,6,7,8-H7CDF (CAS 67562-39-4), 2,3,4,6,7,8-H7CDF (CAS 67562-39-4), 2,3,4,6,7,8-H7CDF (CAS 67562-39-4), 2,3,4,6,7,8-H7CDF (CAS 67562-39-4), 2,3,4,6,7,8-H7CDF (CAS 67562-30-4), 2,3,4,6,7,8-H7CDF (CAS 67562-30-4), 1,2,3,4,7,8,9-H7CDF (CAS 55673-89-7), 1,2,3,4,6,7,8,9-O8CDF (CAS 39001-02-0)

12 dioxin-like polychlorinated biphenyls (PCB-DL): 3,3',4,4'-T4CB (PCB 77, CAS 32598-13-3), 3,3',4',5-T4CB (PCB 81, CAS 70362-50-4), 2,3,3',4,4'-P5CB (PCB 105, CAS 32598-14-4), 2,3,4,4',5-P5CB (PCB 114, CAS 74472-37-0), 2,3',4,4',5-P5CB (PCB 118, CAS 31508-00-6), 2,3',4,4',5'-P5CB (PCB 123, CAS 65510-44-3), 3,3',4,4',5-P5CB (PCB 126, CAS 57465-28-8), 2,3,3',4,4',5-H6CB (PCB 156, CAS 38380-08-4), 2,3,3',4,4',5'-H6CB (PCB 157, CAS 69782-90-7), 2,3',4,4',5,5'-H6CB (PCB 167, CAS 52663-72-6), 3,3',4,4',5,5'-H6CB (PCB 169, CAS 32774-16-6), 2,3,3',4,4',5,5'-H7CB (PCB 189, CAS 320,0) 39635-31-9).

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Legend	
A)	Indicative list of the main pollutants
B)	List of priority substances in the field of water policy
C)	Environmental Quality Standards for Priority Substances and certain other pollutants
HAZ	Identified as priority hazardous substance

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

chemicals subject to the international prior informed consent (PIC) procedure (the 'PIC procedure').

Name of substance	Name acc. to inventory	CAS No	Wt%	Category / subcat- egory	Use limita- tion
PCB 27	polychlorinated biphenyls (PCB)	1336-36- 3	100	i	
PCB 27	polychlorinated biphenyls (PCB)	1336-36- 3	100		

Legend

i

Category: i - industrial chemical

Regulation on persistent organic pollutants (POP)

Name of substance	CAS No	Wt%	Type of registra- tion	Re- marks	Exemp- tions	Concen- tration limit
PCB 27	1336-36-3	100	Annex I - A		A1-ex-08	
PCB 27	1336-36-3	100	Annex III - A			
PCB 27	1336-36-3	100	Annex IV			50 mg/kg

Legend

Without prejudice to Directive 96/59/EC, articles already in use at the time of the entry into force of this Regula-A1-ex-08

tion are allowed to be used. Member States shall identify and remove from use equipment (e.g. transformers, capacitors or other receptacles containing liquid stocks) containing more than 0,005 % PCBs and volumes greater than 0,05 dm3, as soon as possible but no later than 31 December 2025. Part A - Substances listed in the Convention and in the Protocol as well as substances listed only in the Convention

annex I - A annex III - A List of substances subject to release reduction provisions

List of substances subject to waste management provisions set out in Article 7 annex IV

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list not listed

Restrictions according to GB REACH, Annex 17

not 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.

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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
KR	KECI	substance is listed
MX	INSQ	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

Legend

Australian Inventory of Industrial Chemicals

AIIC DSL ECSI IECSC

Adstralian Inventory of Industrial Chemicals Domestic Substances List (DSL) EC Substance Inventory (EINECS, ELINCS, NLP) Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances Korea Existing Chemicals Inventory Philippine Inventory of Chemicals and Chemical Substances (PICCS)

INSQ

KECI

- PICCS 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

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
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)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)

acc. to Regulation (EC) No. 1907/2006 (REACH)

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Abbr.	Descriptions of used abbreviations
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions
ΙΑΤΑ	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
NLP	No-Longer Polymer
РВТ	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). 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
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Disclaimer

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