

# Safety data sheet Safety data sheet

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



## PCB 89 ROTI®Star

article number: **1THE**  
Version: **1.0 en**

date of compilation: 2022-09-08

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

### 1.1 Product identifier

|                                 |   |
|---------------------------------|---|
| Identification of the substance | <b>PCB 89 ROTI®Star</b>                               |
| Article number                  | 1THE  |
| EC number                       | 690-337-5   |
| CAS number                      | 73575-57-2  |
| Alternative name(s)             | Biphenyl, polychlorinated<br>Hydrocarbon, chlorinated |
| Alternative number(s)           | CAS number: 1336-36-3                                 |

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

|                           |   |
|---------------------------|---|
| Relevant identified uses: | Laboratory and analytical use<br>Laboratory chemical  |
| 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 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 |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>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

H373

May cause damage to organs through prolonged or repeated exposure

H410

Very 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 89

Molecular formula

C<sub>12</sub>H<sub>5</sub>Cl<sub>5</sub>

Molar mass

326,4 g/mol

CAS No

73575-57-2

EC No

690-337-5

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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 (CO<sub>2</sub>), 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)

| Country | Name of agent                   | CAS No    | Identifier | TWA [mg/m <sup>3</sup> ] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source    |
|---------|---------------------------------|-----------|------------|--------------------------|---------------------------|--------------------------------|----------|-----------|
| GB      | polychlorinated biphenyls (PCB) | 1336-36-3 | WEL        | 0,1                      |                           |                                |          | EH40/2005 |

#### 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)

### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

##### Eye/face protection



Use safety goggles 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

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  |
| <u>Solubility(ies)</u>                                   |   |
| Water solubility   | (practically insoluble)                                   |
| <u>Partition coefficient</u>                             |   |
| Partition coefficient n-octanol/water (log value):       | this information is not available                         |
| Vapour pressure  | not determined  |
| <u>Density and/or relative density</u>                   |   |
| 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

## 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

### 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: 1,176 mg/mg  
Theoretical Carbon Dioxide: 1,618 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

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|                                   |                                      |
|-----------------------------------|--------------------------------------|
| ADRRID                            | II                                   |
| IMDG-Code                         | II                                   |
| ICAO-TI                           | II                                   |
| <b>14.5 Environmental hazards</b> | 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 instruments



The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

|   |   |
|---|---|
| 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  |
| <b>Emergency Action Code</b>  | 2X  |

#### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

|   |                           |
|---|---------------------------|
| <b>Classification code</b>  | M2                        |
| <b>Danger label(s)</b>  | 9<br>Fish and tree        |
|   |                           |
| <b>Environmental hazards</b>  | Yes<br>Hazardous to water |
| <b>Special provisions (SP)</b>  | 305, 802(ADN)             |
| <b>Excepted quantities (EQ)</b>   | E2                        |
| <b>Limited quantities (LQ)</b>  | 1 kg                      |

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|   |   |
|---|---|
| <b>Transport category (TC)</b>  | 0   |
| <b>Hazard identification No</b>   | 90  |
| <b>International Maritime Dangerous Goods Code (IMDG) - Additional information</b>        |   |
| 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   |
| <b>International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information</b> |   |
| 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)

##### Seveso Directive

| 2012/18/EU (Seveso III) |  |   |       |
|-------------------------|--|---|-------|
| No                      | Dangerous substance/hazard categories                                | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| E1                      | environmental hazards (hazardous to the aquatic environment, 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

|             |     |
|-------------|-----|
| VOC content | 0 % |
|-------------|-----|

### Industrial Emissions Directive (IED)

|             |     |
|-------------|-----|
| VOC content | 0 % |
|-------------|-----|

### 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 89  | 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 89                   | Dioxins and dioxin-like compounds   |        | b)        | HAZ (9) |
| PCB 89                   | Dioxins and dioxin-like compounds   |        | c)        |         |
| PCB 89                   | Organohalogen compounds and substances which may form such compounds in the aquatic environment   |        | a)        |         |
| PCB 89                   | Substances and preparations, or the breakdown products of such, which have been proved to possess 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 89                   | Persistent hydrocarbons and persistent and bioaccumulable organic 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 60851-34-5), 1,2,3,4,6,7,8-H7CDF (CAS 67562-39-4), 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 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 / subcategory | Use limitation |
|-------------------|---------------------------------|-----------|-----|------------------------|----------------|
| PCB 89            | polychlorinated biphenyls (PCB) | 1336-36-3 | 100 | i                      |                |
| PCB 89            | 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 registration | Re-remarks | Exemptions | Concentration limit |
|-------------------|-----------|-----|----------------------|------------|------------|---------------------|
| PCB 89            | 1336-36-3 | 100 | Annex I - A          |            | A1-ex-08   |                     |
| PCB 89            | 1336-36-3 | 100 | Annex III - A        |            |            |                     |
| PCB 89            | 1336-36-3 | 100 | Annex IV             |            |            | 50 mg/kg            |

### Legend

- A1-ex-08 Without prejudice to Directive 96/59/EC, articles already in use at the time of the entry into force of this Regulation 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 dm<sup>3</sup>, as soon as possible but no later than 31 December 2025.
- annex I - A Part A - Substances listed in the Convention and in the Protocol as well as substances listed only in the Convention
- annex III - A List of substances subject to release reduction provisions
- annex IV List of substances subject to waste management provisions set out in Article 7

### 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

|       |   |
|-------|---|
| AIIC  | Australian Inventory of Industrial Chemicals                            |
| 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                                      |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (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 navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR       | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning 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 identifier of substances commercially available within the EU (European Union)                                     |
| EH40/2005 | EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )                                 |
| 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)  |

# Safety data sheet Safety data sheet

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 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   |
| NLP       | No-Longer Polymer   |
| PBT       | Persistent, Bioaccumulative and Toxic   |
| REACH     | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID       | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations 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.