

# Safety data sheet Safety data sheet

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



## PCBs Standard Solution ROTI®Star 7 PCBs in isooctane, 10 µg/ml

article number: 1YXX  
Version: 1.0 en

date of compilation: 2023-02-28

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

#### 1.1 Product identifier

Identification of the substance **PCBs Standard Solution ROTI®Star 7 PCBs in isooctane, 10 µg/ml**

Article number 1YXX

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

Relevant identified uses: Laboratory and analytical use  
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

Classification acc. to GHS

| Section | Hazard class  | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 2.6     | Flammable liquid  | 2         | Flam. Liq. 2              | H225             |
| 3.2     | Skin corrosion/irritation   | 2         | Skin Irrit. 2             | H315             |
| 3.8D    | Specific target organ toxicity - single exposure (narcotic effects, drowsiness) | 3         | STOT SE 3                 | H336             |
| 3.9     | Specific target organ toxicity - repeated exposure                              | 2         | STOT RE 2                 | H373             |
| 3.10    | Aspiration hazard   | 1         | Asp. Tox. 1               | H304             |

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| Section | Hazard class  | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 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. The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

## 2.2 Label elements

### Labelling

#### Signal word

**Danger**

#### Pictograms

GHS02, GHS07,  
GHS08, GHS09



#### Hazard statements

H225 Highly flammable liquid and vapour  
H304 May be fatal if swallowed and enters airways  
H315 Causes skin irritation  
H336 May cause drowsiness or dizziness  
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

P280 Wear protective gloves/protective clothing/eye protection/face protection

**Hazardous ingredients for labelling:** Isooctane, Polychlorobiphenyls (PCB)

## 2.3 Other hazards

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

| Name of substance         | Identifier  | Wt%        | Classification acc. to GHS  | Pictograms   | Notes          |
|---------------------------|---|------------|---|--|----------------|
| Isooctane                 | CAS No<br>540-84-1<br><br>EC No<br>208-759-1<br><br>Index No<br>601-009-00-8  | 99 - < 100 | Flam. Liq. 2 / H225<br>Skin Irrit. 2 / H315<br>STOT SE 3 / H336<br>Asp. Tox. 1 / H304<br>Aquatic Acute 1 / H400<br>Aquatic Chronic 1 / H410 |  <br>  | C(a)<br>GHS-HC |
| Polychlorobiphenyls (PCB) | CAS No<br>1336-36-3<br><br>EC No<br>215-648-1<br><br>Index No<br>602-039-00-4 | < 0,01     | STOT RE 2 / H373<br>Aquatic Acute 1 / H400<br>Aquatic Chronic 1 / H410  |    | C<br>GHS-HC    |

#### Notes

C(a): Mixture of isomers

C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

| Name of substance         | Identifier                                    | Specific Conc. Limits        | M-Factors | ATE | Exposure route |
|---------------------------|---|------------------------------|-----------|-----|----------------|
| Polychlorobiphenyls (PCB) | CAS No<br>1336-36-3<br><br>EC No<br>215-648-1 | STOT RE 2; H373: C ≥ 0,005 % | -         | -   |                |

For full text of abbreviations: see SECTION 16

## 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.

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### 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. Do not induce vomiting. Observe aspiration hazard if vomiting occurs. Call a physician immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

Following inhalation: Drowsiness, Dizziness, Narcosis,  
Following skin contact: Irritation,  
After eye contact: Irritant effects,  
Following ingestion: Aspiration hazard

### 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 spray, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours may form explosive mixtures with air.

#### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), May produce toxic fumes of carbon monoxide if burning.

### 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.

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## 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 vapour/spray. Avoidance of ignition sources.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. Danger of explosion.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### 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.

#### Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage

of vapours into cellars, flues and ditches.

#### 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. When using do not smoke.

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### 7.2 Conditions for safe storage, including any incompatibilities

Keep in a cool place.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

Ground/bond container and receiving equipment.

#### Ventilation requirements

Use local and general ventilation.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 2 – 8 °C

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent                   | CAS No    | Identifier | TWA [ppm] | TWA [mg/m <sup>3</sup> ] | STEL [ppm] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [ppm] | 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)

#### Relevant DNELs of components of the mixture

| Name of substance | CAS No   | End-point | Threshold level         | Protection goal, route of exposure | Used in           | Exposure time              |
|-------------------|----------|-----------|-------------------------|------------------------------------|-------------------|----------------------------|
| Isooctane         | 540-84-1 | DNEL      | 2.035 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| Isooctane         | 540-84-1 | DNEL      | 773 mg/kg bw/day        | human, dermal                      | worker (industry) | chronic - systemic effects |

### 8.2 Exposure controls

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

#### Eye/face protection



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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

NBR (Nitrile rubber)

#### • material thickness

>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.

Flame-retardant protective clothing.

### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

### 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   | liquid   |
| Colour   | colourless                                       |
| Odour  | like: - Gasoline                                 |
| Melting point/freezing point                             | -107 °C  |
| Boiling point or initial boiling point and boiling range | 99,2 °C at 1.013 hPa                             |
| Flammability   | flammable liquid in accordance with GHS criteria |

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|  |   |
|--|---|
| Lower and upper explosion limit                    | 45 g/m <sup>3</sup> (LEL) - 290 g/m <sup>3</sup> (UEL) /<br>1 vol% (LEL) - 6 vol% (UEL) |
| Flash point  | -12 °C  |
| Auto-ignition temperature                          | 418 °C (auto-ignition temperature (liquids and gases))                                  |
| Decomposition temperature                          | not relevant  |
| pH (value)   | not determined  |
| Kinematic viscosity                                | not determined  |
| Dynamic viscosity                                  | 0,5 mPa s at 20 °C  |
| <u>Solubility(ies)</u>                             |   |
| Water solubility                                   | (poorly soluble (1 till < 10 mg/l))   |
| <u>Partition coefficient</u>                       |   |
| Partition coefficient n-octanol/water (log value): | this information is not available   |
| Vapour pressure                                    | 28 hPa at 20 °C   |
| <u>Density and/or relative density</u>             |   |
| Density  | 0,69 g/cm <sup>3</sup> at 15 °C   |
| Relative vapour density                            | 3,9 (air = 1)   |
| Particle characteristics                           | not relevant (liquid)   |
| <u>Other safety parameters</u>                     |   |
| Oxidising properties                               | none  |

### 9.2 Other information

|   |                                     |
|---|-------------------------------------|
| Information with regard to physical hazard classes: | There is no additional information. |
| Other safety characteristics:                       |                                     |
| Maximum explosion pressure                          | 9 bar                               |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition. Vapours may form explosive mixtures with air.

#### If heated

Risk of ignition.

### 10.2 Chemical stability

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



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### 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

different plastics

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to GHS

#### Acute toxicity

Shall not be classified as acutely toxic.

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

#### Acute toxicity of components of the mixture

| Name of substance | CAS No   | Exposure route     | Endpoint | Value          | Species |
|-------------------|----------|--------------------|----------|----------------|---------|
| Isooctane         | 540-84-1 | oral               | LD50     | >5.000 mg/kg   | rat     |
| Isooctane         | 540-84-1 | inhalation: vapour | LC50     | >33,52 mg/l/4h | rat     |
| Isooctane         | 540-84-1 | dermal             | LD50     | >2.000 mg/kg   | rabbit  |

#### Skin corrosion/irritation

Causes skin irritation.

#### 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.

#### Carcinogenicity

Shall not be classified as carcinogenic.

#### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

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### Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

### Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

### Aspiration hazard

May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

vomiting, aspiration hazard

#### • If in eyes

causes slight to moderate irritation

#### • If inhaled

drowsiness, dizziness, fatigue, narcosis

#### • If on skin

causes skin irritation

#### • Other information

none

### 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

### 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.

| Aquatic toxicity (acute) of components of the mixture |          |          |           |                       |               |
|---|----------|----------|-----------|-----------------------|---------------|
| Name of substance                                     | CAS No   | Endpoint | Value     | Species               | Exposure time |
| Isooctane   | 540-84-1 | LL50     | 18,4 mg/l | fish                  | 96 h          |
| Isooctane   | 540-84-1 | LC50     | 0,11 mg/l | fish                  | 96 h          |
| Isooctane   | 540-84-1 | EC50     | 0,4 mg/l  | aquatic invertebrates | 48 h          |
| Isooctane   | 540-84-1 | EL50     | 2,4 mg/l  | aquatic invertebrates | 48 h          |

| Aquatic toxicity (chronic) of components of the mixture |          |          |           |                       |               |
|---|----------|----------|-----------|-----------------------|---------------|
| Name of substance                                       | CAS No   | Endpoint | Value     | Species               | Exposure time |
| Isooctane   | 540-84-1 | EL50     | 1,6 mg/l  | aquatic invertebrates | 21 d          |
| Isooctane   | 540-84-1 | EC50     | 0,23 mg/l | aquatic invertebrates | 21 d          |

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### 12.2 Persistence and degradability

#### Degradability of components of the mixture

| Name of substance | CAS No   | Process          | Degradation rate | Time | Method | Source |
|-------------------|----------|------------------|------------------|------|--------|--------|
| Isooctane         | 540-84-1 | oxygen depletion | 61,81 %          | 70 d |        | ECHA   |

### 12.3 Bioaccumulative potential

Data are not available.

#### Bioaccumulative potential of components of the mixture

| Name of substance | CAS No   | BCF | Log KOW | BOD5/COD |
|-------------------|----------|-----|---------|----------|
| Isooctane         | 540-84-1 | 231 | 4,08    |          |

### 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 (EDC) in 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. 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.

#### Properties of waste which render it hazardous

**HP 3** flammable

**HP 5** specific target organ toxicity (STOT)/aspiration toxicity

**HP 14** ecotoxic

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### 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 1262 |
| IMDG-Code | UN 1262 |
| ICAO-TI   | UN 1262 |

### 14.2 UN proper shipping name

|           |         |
|-----------|---------|
| ADRRID    | OCTANES |
| IMDG-Code | OCTANES |
| ICAO-TI   | Octanes |

### 14.3 Transport hazard class(es)

|           |   |
|-----------|---|
| ADRRID    | 3 |
| IMDG-Code | 3 |
| ICAO-TI   | 3 |

### 14.4 Packing group

|           |    |
|-----------|----|
| ADRRID    | II |
| IMDG-Code | II |
| ICAO-TI   | II |

### 14.5 Environmental hazards

|  |                                      |
|--|--------------------------------------|
|  | hazardous to the aquatic environment |
| Environmentally hazardous substance (aquatic environment): | Isooctane                            |

### 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

#### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

|                                       |  |
|---------------------------------------|--|
| Proper shipping name                  | OCTANES  |
| Particulars in the transport document | UN1262, OCTANES, 3, II, (D/E), environmentally hazardous |
| Classification code                   | F1   |
| Danger label(s)                       | 3, "Fish and tree"                                       |



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|                               |  |
|-------------------------------|--|
| Environmental hazards         | yes (hazardous to the aquatic environment) |
| Excepted quantities (EQ)      | E2   |
| Limited quantities (LQ)       | 1 L  |
| Transport category (TC)       | 2  |
| Tunnel restriction code (TRC) | D/E  |
| Hazard identification No      | 33   |
| <b>Emergency Action Code</b>  | 3YE  |

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

|                            |                    |
|----------------------------|--------------------|
| <b>Classification code</b> | F1                 |
| <b>Danger label(s)</b>     | 3<br>Fish and tree |



|                                 |                           |
|---------------------------------|---------------------------|
| <b>Environmental hazards</b>    | Yes<br>Hazardous to water |
| <b>Excepted quantities (EQ)</b> | E2                        |
| <b>Limited quantities (LQ)</b>  | 1 L                       |
| <b>Transport category (TC)</b>  | 2                         |
| <b>Hazard identification No</b> | 33                        |

### International Maritime Dangerous Goods Code (IMDG) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | OCTANES  |
| Particulars in the shipper's declaration | UN1262, OCTANES, 3, II, -12°C c.c., MARINE POLLUTANT |
| Marine pollutant                         | yes (P) (hazardous to the aquatic environment)       |
| <b>Danger label(s)</b>                   | 3, "Fish and tree"                                   |



|                          |          |
|--------------------------|----------|
| Special provisions (SP)  | -        |
| Excepted quantities (EQ) | E2       |
| Limited quantities (LQ)  | 1 L      |
| EmS                      | F-E, S-E |
| Stowage category         | B        |

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

|  |  |
|--|--|
| Proper shipping name                     | Octanes                                    |
| Particulars in the shipper's declaration | UN1262, Octanes, 3, II                     |
| Environmental hazards                    | yes (hazardous to the aquatic environment) |
| <b>Danger label(s)</b>                   | 3  |

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Excepted quantities (EQ)

E2

Limited quantities (LQ)

1 L

## 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

##### Deco-Paint Directive

|             |                    |
|-------------|--------------------|
| VOC content | 99,99 %<br>690 g/l |
|-------------|--------------------|

##### Industrial Emissions Directive (IED)

|             |         |
|-------------|---------|
| VOC content | 99,99 % |
| VOC content | 690 g/l |

##### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are 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) |
| Polychlorobiphenyls (PCB)                       | 1336-36-3 |         | 0,1                                     |

##### Water Framework Directive (WFD)

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



## PCBs Standard Solution ROTI®Star 7 PCBs in isooctane, 10 µg/ml

article number: 1YXX

| List of pollutants (WFD)  |   |        |           |         |
|---------------------------|---|--------|-----------|---------|
| Name of substance         | Name acc. to inventory  | CAS No | Listed in | Remarks |
| Polychlorobiphenyls (PCB) | Organohalogen compounds and substances which may form such compounds in the aquatic environment   |        | a)        |         |
| Polychlorobiphenyls (PCB) | 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)        |         |
| Polychlorobiphenyls (PCB) | Persistent hydrocarbons and persistent and bioaccumulable organic toxic substances  |        | a)        |         |

### Legend

A) Indicative list of the main pollutants

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### Regulation on drug precursors

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are 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 |
|---------------------------|---------------------------------|-----------|-------|------------------------|----------------|
| Polychlorobiphenyls (PCB) | polychlorinated biphenyls (PCB) | 1336-36-3 | 0,007 | i                      |                |
| Polychlorobiphenyls (PCB) | polychlorinated biphenyls (PCB) | 1336-36-3 | 0,007 |                        |                |

### Legend

i Category: i - industrial chemical

### Regulation on persistent organic pollutants (POP)

| Name of substance         | CAS No    | Wt%   | Type of registration | Remarks | Exemptions | Concentration limit |
|---------------------------|-----------|-------|----------------------|---------|------------|---------------------|
| Polychlorobiphenyls (PCB) | 1336-36-3 | 0,007 | Annex I - A          |         | A1-ex-08   |                     |
| Polychlorobiphenyls (PCB) | 1336-36-3 | 0,007 | Annex III - A        |         |            |                     |
| Polychlorobiphenyls (PCB) | 1336-36-3 | 0,007 | 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.

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### Legend

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

none of the ingredients are listed

#### Restrictions according to GB REACH, Annex 17

| Dangerous substances with restrictions (GB REACH, Annex 17) |  |        |    |
|---|--|--------|----|
| Name of substance   | Name acc. to inventory   | CAS No | No |
| PCBs Standard Solution                                      | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC |        | 3  |
| Isooctane   | flammable / pyrophoric   |        | 40 |

### Other information

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

### National inventories

| Country | Inventory  | Status                                 |
|---------|------------|--|
| AU      | AIIC       | all ingredients are listed             |
| CA      | DSL        | all ingredients are listed             |
| CN      | IECSC      | all ingredients are listed             |
| EU      | ECSI       | all ingredients are listed             |
| EU      | REACH Reg. | not all ingredients are listed         |
| JP      | CSCL-ENCS  | not all ingredients are listed         |
| KR      | KECI       | all ingredients are listed             |
| MX      | INSQ       | all ingredients are listed             |
| NZ      | NZIoC      | not all ingredients are listed         |
| PH      | PICCS      | all ingredients are listed             |
| TR      | CICR       | not all ingredients are listed         |
| TW      | TCSI       | all ingredients are listed             |
| US      | TSCA       | all ingredients are listed as "ACTIVE" |

### Legend

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



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### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Abbreviations and acronyms

| Abbr.           | Descriptions of used abbreviations  |
|-----------------|---|
| ADR             | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)                         |
| Aquatic Acute   | Hazardous to the aquatic environment - acute hazard   |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard   |
| Asp. Tox.       | Aspiration hazard   |
| ATE             | Acute Toxicity Estimate   |
| BCF             | Bioconcentration factor   |
| BOD             | Biochemical Oxygen Demand   |
| CAS             | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| Ceiling-C       | Ceiling value   |
| COD             | Chemical oxygen demand  |
| DGR             | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL            | Derived No-Effect Level   |
| 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      |
| 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   |
| EL50            | Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms  |
| ELINCS          | European List of Notified Chemical Substances   |
| EmS             | Emergency Schedule  |
| Flam. Liq.      | Flammable liquid  |
| GB REACH        | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)  |
| 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   |

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| Abbr.       | Descriptions of used abbreviations  |
|-------------|---|
| index No    | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| 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  |
| LEL         | Lower explosion limit (LEL)   |
| LL50        | Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality  |
| log KOW     | n-Octanol/water   |
| NLP         | No-Longer Polymer   |
| PBT         | Persistent, Bioaccumulative and Toxic   |
| ppm         | Parts per million   |
| 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) |
| Skin Corr.  | Corrosive to skin   |
| Skin Irrit. | Irritant to skin  |
| STEL        | Short-term exposure limit   |
| STOT RE     | Specific target organ toxicity - repeated exposure  |
| STOT SE     | Specific target organ toxicity - single exposure  |
| TWA         | Time-weighted average   |
| UEL         | Upper explosion limit (UEL)   |
| 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).

### Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

| Code | Text  |
|------|---|
| H225 | Highly flammable liquid and vapour.           |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation.                       |
| H336 | May cause drowsiness or dizziness.            |

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| 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.