

### Safety data sheet according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 8 (replaces version 7)

Revision: 14.11.2023

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

· **1.1 Product identifier**

· **Product name:** Vario Phosphate RGT F10 ml

· **Catalog number:** 00531559, 531550, 00531558, 531551, 531552, 531553

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**

Tintometer GmbH  
Schleefstraße 8-12  
44287 Dortmund  
Made in Germany  
www.lovibond.com

phone: +49 (0)231 94510-0  
e-mail: sales@lovibond.com

The Tintometer Limited  
Lovibond® House  
Sun Rise Way  
Amesbury  
Wiltshire SP4 7GR  
United Kingdom

phone : +44 1980 664800  
e-mail: SDS@lovibond.uk

· **Informing department:**

e-mail: sds@lovibond.com  
Product Safety Department

· **1.4 Emergency telephone number:**

+44 1235 239670  
Languages: English

#### SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS05 GHS06

· **Signal word** Danger

(Contd. on page 2)

GB

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 8 (replaces version 7)

Revision: 14.11.2023

**Product name: Vario Phosphate RGT F10 ml**

(Contd. of page 1)

**Hazard-determining components of labelling:**

dipotassium disulfate

**Hazard statements**

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P261 Avoid breathing dust.

P280 Wear protective gloves/protective clothing/eye protection.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

**2.3 Other hazards** No further relevant information available.

**Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

**Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

### SECTION 3: Composition/information on ingredients

**3.2 Mixtures**
**Description:** Mixture of organic and inorganic compounds

**Dangerous components:**

CAS: 7790-62-7 EINECS: 232-216-8	dipotassium disulfate ⚠ Acute Tox. 3, H331; ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318 ATE: LD50 oral: 2500 mg/kg LC50/4h inhalative: 0.5 mg/l	70–80%
CAS: 28300-74-5 EINECS: 234-293-3 Index No: 051-003-00-9	potassium antimony(III) oxide tartrate trihydrate ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	≤0.1%

**Additional information** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

**4.1 Description of first aid measures**
**General information** Instantly remove any clothing soiled by the product.

**After inhalation** Supply fresh air or oxygen; call for doctor.

**After skin contact**

Instantly rinse with water.

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

**After eye contact**

Rinse opened eye for several minutes (at least 15 min) under running water.

Call a doctor immediately.

**After swallowing**

Rinse out mouth and then drink 1-2 glasses of water.

Do not induce vomiting; instantly call for medical help.

**4.2 Most important symptoms and effects, both acute and delayed:**

burns

absorption

coughing

breathing difficulty

after inhalation:

after absorption of large amounts:

sickness

vomiting

gastric or intestinal trouble

drowsiness

dizziness

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

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Version number 8 (replaces version 7)

Revision: 14.11.2023

---

**Product name: Vario Phosphate RGT F10 ml**


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(Contd. of page 2)

- **Danger**

- Danger of gastric perforation.
  - Danger of pulmonary oedema.

- **4.3 Indication of any immediate medical attention and special treatment needed:**

- If swallowed or in case of vomiting, danger of entering the lungs
  - Subsequent observation for pneumonia and pulmonary oedema

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### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

- **5.2 Special hazards arising from the substance or mixture**

- The product is not combustible.
  - Formation of toxic gases is possible during heating or in case of fire.
  - Sulphur oxides (SO<sub>x</sub>)
  - Dipotassium oxide
  - Carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>)

- **5.3 Advice for firefighters**

- **Protective equipment:**

- Wear self-contained breathing apparatus.
    - Wear full protective suit.

- **Additional information**

- Collect contaminated fire fighting water separately. It must not enter drains.
    - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
    - Ambient fire may liberate hazardous vapours.

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### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

- **Advice for non-emergency personnel:**

- Wear protective equipment. Keep unprotected persons away.
    - Avoid substance contact.
    - Ensure adequate ventilation
    - Use breathing protection against the effects of fumes/dust/aerosol.

- **Advice for emergency responders:** Protective equipment: see section 8

- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.

- **6.3 Methods and material for containment and cleaning up:**

- Ensure adequate ventilation.
    - Collect mechanically.
    - Dispose of contaminated material as waste according to item 13.

- **6.4 Reference to other sections**

- See Section 8 for information on personal protection equipment.
    - See Section 13 for information on disposal.

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### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

- **Advice on safe handling:**

- Open and handle container with care.
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of dust.

- **Hygiene measures:**

- Do not inhale dust / smoke / mist.
    - Do not get in eyes, on skin, or on clothing.
    - Take off immediately all contaminated clothing.
    - Wash hands during breaks and at the end of the work.
    - Do not eat, drink or smoke when using this product.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and containers:** Store in cool location.

- **Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 8 (replaces version 7)

Revision: 14.11.2023

---

**Product name: Vario Phosphate RGT F10 ml**


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(Contd. of page 3)

- **Further information about storage conditions:**  
Store in a locked cabinet or with access restricted to technical experts or their assistants.  
Protect from heat and direct sunlight.  
Protect from the effects of light.  
Store under dry conditions.  
Protect from humidity and keep away from water.
  - **Recommended storage temperature:** 20°C +/- 5°C
  - **7.3 Specific end use(s)** No further relevant information available.
- 

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
  - **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - **Recommended monitoring procedures:**  
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.
  - **Additional information:** The lists that were valid during the compilation were used as basis.
  - **8.2 Exposure controls**
  - **Engineering measures:**  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.  
See item 7.
  - **Individual protection measures, such as personal protective equipment**  
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
  - **Eye/face protection** Tightly sealed safety glasses.
  - **Hand protection**  
Protective gloves.  
Preventive skin protection by use of skin-protecting agents is recommended.  
After use of gloves apply skin-cleaning agents and skin cosmetics.
  - **Material of gloves**  
nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm
  - **Penetration time of glove material**  
Value for the permeation: Level = 1 (< 10 min )  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Other skin protection (body protection):** Acid resistant protective clothing
  - **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
  - **Recommended filter device for short term use:** Filter P3
  - **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.
- 

### SECTION 9: Physical and chemical properties

- |  |                                 |
|--|---------------------------------|
| · <b>9.1 Information on basic physical and chemical properties</b> |                                 |
| · <b>Physical state</b>  | Solid.                          |
| · <b>Form:</b>   | Powder                          |
| · <b>Colour:</b>   | White                           |
| · <b>Odour:</b>  | Odourless                       |
| · <b>Odour threshold:</b>  | Not applicable.                 |
| · <b>Melting point/Freezing point:</b>                             | Not determined.                 |
| · <b>Boiling point or initial boiling point and boiling range</b>  | Not determined.                 |
| · <b>Flammability</b>  | The product is not combustible. |
| · <b>Explosive properties:</b>                                     | Product is not explosive.       |
| · <b>Lower and upper explosion limit</b>                           |                                 |
| <b>Lower:</b>  | Not applicable.                 |
| <b>Upper:</b>  | Not applicable.                 |
| · <b>Flash point:</b>  | Not applicable.                 |
| · <b>Auto-ignition temperature:</b>                                | Not applicable (solid).         |
| · <b>Decomposition temperature:</b>                                | Not determined.                 |

(Contd. on page 5)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 8 (replaces version 7)

Revision: 14.11.2023

**Product name: Vario Phosphate RGT F10 ml**

(Contd. of page 4)

· pH (31.3 g/l) at 20°C	1.2
· Kinematic viscosity	Not applicable (solid).
· Solubility	
· Water:	Soluble
· Partition coefficient n-octanol/water (log value)	Not applicable (mixture).
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20°C:	2.38 g/cm <sup>3</sup>
· Relative density:	Not determined.
· Relative gas density	Not applicable (solid).
· Particle characteristics	Not determined.
<b>9.2 Other information</b>	
· Information with regard to physical hazard classes	
· Corrosive to metals	Void
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	100.0 %

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability**  
Stable at ambient temperature (room temperature).  
sensitive to moisture  
sensitivity to light  
sensitive to air
- **10.3 Possibility of hazardous reactions** Aqueous solution reacts acidic.
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** metals
- **10.6 Hazardous decomposition products:** see section 5

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

- **Acute toxicity**  
Classification according to calculation procedure:  
Toxic if inhaled.

- **Acute toxicity estimate (ATE<sub>(mix)</sub>) - Calculation method:**

Inhalative	CLP ATE <sub>(mix)</sub>	0.7 mg/l/4h (dust)
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- **LD/LC50 values that are relevant for classification:**

**CAS: 7790-62-7 dipotassium disulfate**

Oral	LD50	2500 mg/kg (ATE) (Read across 7664-93-9: LD <sub>50</sub> (rat) = 2140 mg/kg, ECHA)
Inhalative	LC50/4h	0.5 mg/l (ATE) (Aerosol) (Read across 7664-93-9: LD <sub>50</sub> (rat, 4h) = ~ 850 mg/m <sup>3</sup> , ECHA)

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes serious eye damage.  
Risk of blindness!
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

(Contd. on page 6)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 8 (replaces version 7)

Revision: 14.11.2023

**Product name: Vario Phosphate RGT F10 ml**

(Contd. of page 5)

- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **Other information**  
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Bacterial toxicity:** sulphates toxic > 2.5 g/l
- **Other information:**  
Toxic for fish:  
Sulphates > 7 g/l  
molybdenum compounds in general: > 25 mg/l
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**  
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects** Avoid transfer into the environment.
- **Water hazard:**  
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to disposers of hazardous waste.

<b>European waste catalogue</b>	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### SECTION 14: Transport information

- |                                     |   |
|-------------------------------------|---|
| <b>14.1 UN number or ID number</b>  |   |
| <b>ADR, IMDG, IATA</b>              | UN2923  |
| <b>14.2 UN proper shipping name</b> |   |
| <b>ADR</b>                          | 2923 CORROSIVE SOLID, TOXIC, N.O.S. (dipotassium disulfate) |
| <b>IMDG, IATA</b>                   | CORROSIVE SOLID, TOXIC, N.O.S. (dipotassium disulfate)      |

(Contd. on page 7)

— GB —

# Safety data sheet

## according to 1907/2006/EC, Article 31







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Version number 8 (replaces version 7)

Revision: 14.11.2023

**Product name: Vario Phosphate RGT F10 ml**

(Contd. of page 6)

<ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR</b></li> </ul>		
 		
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	8 (CT2) Corrosive substances. 8+6.1	
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>		
 		
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	8 Corrosive substances. 8/6.1	
<ul style="list-style-type: none"> <li>· <b>IATA</b></li> </ul>		
 		
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	8 Corrosive substances. 8 (6.1)	
<ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>		II
<ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>		No
<ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Kemler Number:</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul>		Warning: Corrosive substances. 86 F-A,S-B (SGG1) Acids B SW2 Clear of living quarters.
<ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>		Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>		
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>		1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
<ul style="list-style-type: none"> <li>· <b>Transport category</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>		2 E
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>		1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

 GB  
(Contd. on page 8)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 8 (replaces version 7)

Revision: 14.11.2023

Product name: Vario Phosphate RGT F10 ml

(Contd. of page 7)

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

##### Poisons Act UK

##### Regulated explosives precursors

None of the ingredients is listed.

##### Regulated poisons

None of the ingredients is listed.

##### Reportable explosives precursors

None of the ingredients is listed.

##### Reportable poisons

None of the ingredients is listed.

##### Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated

##### Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

##### Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:

None of the ingredients is listed.

##### Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

##### Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

##### Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

##### REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients is listed.

##### LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients is listed.

##### Substances of very high concern (SVHC) according to REACH, Article 57

This product does not contain any substances of very high concern above the legal concentration limit of  $\geq 0.1\%$  (w / w).

##### Substances of very high concern (SVHC) according to UK REACH

This product does not contain any substances of very high concern above the legal concentration limit of  $\geq 0.1\%$  (w / w).

##### Directive 2012/18/EU (SEVESO III):

##### Named dangerous substances - ANNEX I None of the ingredients is listed.

##### Seveso category H2 ACUTE TOXIC

##### Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

##### Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

##### Information about limitation of use: Employment restrictions concerning young persons must be observed (94/33/EC).

##### 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

##### Training hints Provide adequate information, instruction and training for operators.

##### Relevant phrases

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

(Contd. on page 9)

GB



# Safety data sheet

## according to 1907/2006/EC, Article 31

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Version number 8 (replaces version 7)

Revision: 14.11.2023

---

**Product name: Vario Phosphate RGT F10 ml**


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(Contd. of page 8)

H411 Toxic to aquatic life with long lasting effects.

**Abbreviations and acronyms:**

EC50: effective concentration, 50 percent (in vivo)

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

**Sources**

Data arise from safety data sheets, reference works and literature.

ECHA: European Chemicals Agency <http://echa.europa.eu>
**\* Data compared to the previous version altered.**


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