



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

Printing date 12.12.2021

Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****· 1.1 Product identifier****· Trade name:** AR-PC 504**· Article number:** AR-PC 504**· 1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**· Application of the substance / the mixture**

Intermediate product for the electronics industry. For industrial and commercial use only.

**· 1.3 Details of the supplier of the safety data sheet****· Manufacturer/Supplier:**Allresist GmbH  
Am Biotop 14  
15344 Strausberg  
GERMANYE-Mail: [info@allresist.de](mailto:info@allresist.de)

Tel.: +49 3341 35 93 0

**· Further information obtainable from:** Sales**· 1.4 Emergency telephone number:**

Poison center of the Charité Berlin:

+4930 30686700

E-Mail: [giftnotruf@charite.de](mailto:giftnotruf@charite.de)**SECTION 2: Hazards identification****· 2.1 Classification of the substance or mixture****· Classification according to Regulation (EC) No 1272/2008**

flame

Flam. Liq. 3      H226 Flammable liquid and vapour.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Skin Irrit. 2

H315 Causes skin irritation.

Skin Sens. 1

H317 May cause an allergic skin reaction.

(Contd. on page 2)

## Safety data sheet

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

Printing date 12.12.2021

Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

**Trade name: AR-PC 504**

(Contd. of page 1)

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

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

· **Hazard pictograms**

GHS02   GHS07   GHS09

· **Signal word** Warning· **Hazard-determining components of labelling:**

bis[4-(2,3-epoxypropoxy)phenyl]propane

· **Hazard statements**

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P273 Avoid release to the environment.

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

P321 Specific treatment (see on this label).

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

P362+P364 Take off contaminated clothing and wash it before reuse.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 108-90-7 EINECS: 203-628-5	chlorobenzene Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H332; Skin Irrit. 2, H315	50-100%
CAS: 1675-54-3 EINECS: 216-823-5	bis[4-(2,3-epoxypropoxy)phenyl]propane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 %	≥1-<2.5%

(Contd. on page 3)

## Safety data sheet

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

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Version number 5.1 (replaces version 5.0)

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Trade name: AR-PC 504

(Contd. of page 2)

- **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:** Immediately remove any clothing soiled by the product.
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

#### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

#### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

#### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.

(Contd. on page 4)

## Safety data sheet

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

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Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

Trade name: AR-PC 504

(Contd. of page 3)

- 7.2 Conditions for safe storage, including any incompatibilities
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Recommended storage temperature:** 10-25°C
- **Storage class (TRGS):** 3
- 7.3 Specific end use(s) No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

##### · **Ingredients with limit values that require monitoring at the workplace:**

###### **108-90-7 chlorobenzene**

WEL	Short-term value: 14 mg/m <sup>3</sup> , 3 ppm
	Long-term value: 4.7 mg/m <sup>3</sup> , 1 ppm
Sk	

##### · **DNELs**

###### **108-90-7 chlorobenzene**

Dermal	DNEL Long-term – dermal, systemic effects	5 mg/kg_bw/day (Worker)
	DNEL Acute - dermal systemic effects	15 mg/kg bw/day (Worker)
Inhalative	DNEL Long-term – inhalation, systemic effects	23 mg/m <sup>3</sup> /day (Worker)
	DNEL Acute – inhalation, systemic effects	70 mg/m <sup>3</sup> (Worker)

###### **1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane**

Dermal	DNEL Long-term – dermal, systemic effects	8.33 mg/kg_bw/day (Worker)
	DNEL Acute - dermal systemic effects	8.33 mg/kg bw/day (Worker)
Inhalative	DNEL Long-term – inhalation, systemic effects	12.25 mg/m <sup>3</sup> /day (Worker)
	DNEL Acute inhalation systemic effects	12.25 mg/m <sup>3</sup> (Worker)

##### · **PNECs**

###### **108-90-7 chlorobenzene**

PNEC short term, fresh water	0.032 mg/l (Aquatic organisms)
PNEC short term, sea water	0.0032 mg/l (Aquatic organisms)
PNEC short term, sewage plant	1.4 mg/l (Microorganism)
PNEC short term fresh water sediment	0.922 mg/kg (Aquatic organisms)
PNEC short term soil	0.166 mg/kg (terrestrial organisms)
PNEC short term sea water sediment	0.0922 mg/kg (Aquatic organisms)

###### **1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane**

PNEC short term, fresh water	0.006 mg/l (Aquatic organisms)
PNEC short term, sea water	0.001 mg/l (Aquatic organisms)
PNEC short term fresh water sediment	0.341 mg/kg (Aquatic organisms)
PNEC short term soil	0.065 mg/kg (Aquatic organisms)
PNEC short term sea water sediment	0.034 mg/kg (Aquatic organisms)

##### · **Ingredients with biological limit values:**

###### **108-90-7 chlorobenzene**

BMGV	5 mmol/mol creatinine
	Medium: urin
	Sampling time: Post shift
	Parameter: 4-chlorocatechol

(Contd. on page 5)

## Safety data sheet

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

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Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

Trade name: AR-PC 504

(Contd. of page 4)

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:**
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye/face protection**



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Colourless
- **Odour:** benzene-like
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** 132 °C (108-90-7 chlorobenzene)
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** 1.3 Vol % (108-90-7 chlorobenzene)
- **Upper:** 11 Vol % (108-90-7 chlorobenzene)
- **Flash point:** 27 °C

(Contd. on page 6)

## Safety data sheet

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Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

Trade name: AR-PC 504

(Contd. of page 5)

· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Mixture is non-soluble (in water).
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	11.7 hPa
· <b>Density and/or relative density</b>	
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
<b>· 9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Solvent content:</b>	
· <b>VOC (EC)</b>	0.00 %
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.
<b>· Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Flammable liquid and vapour.
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.

(Contd. on page 7)

## Safety data sheet

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

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Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

Trade name: AR-PC 504

(Contd. of page 6)

- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

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

- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

#### 108-90-7 chlorobenzene

Oral	LD50	2,290 mg/kg (rat)
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#### 1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Oral	LD50	>5,000 mg/kg (rat)
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Dermal	LD50	>2,000 mg/kg (rat)
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- **Skin corrosion/irritation** Causes skin irritation.

- **Respiratory or skin sensitisation** May cause an allergic skin reaction.

- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

1675-54-3	bis[4-(2,3-epoxypropoxy)phenyl]propane	List II
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### SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

#### 108-90-7 chlorobenzene

Inhalative	LC50 (4h)	29.7 mg/l (rat)
	LC50 (96h) mg/ltr.	4.5 mg/ltr (Fish)
	EC50 (48h)	0.59 mg/l (daphnia)
	EC50 (30min.)	140 mg/l (Microorganism)
	NOEC	3.3 mg/ml (algae)
		4.8 mg/ml (Fish)
	0.32 mg/ml (daphnia)	

#### 1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

LC50 (96h) mg/ltr.	1.5 mg/ltr (rainbow trout)
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- **12.2 Persistence and degradability**

108-90-7 chlorobenzene	15 %
1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane	5 %

- **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**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.

- **12.7 Other adverse effects** No further relevant information available.

- **Remark:** Toxic for fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

(Contd. on page 8)



## Safety data sheet

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

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Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

**Trade name: AR-PC 504**


(Contd. of page 7)

Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN number or ID number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <p style="text-align: right;">UN1134</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>   | <p style="text-align: right;">1134 CHLOROBENZENE<br/>CHLOROBENZENE</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <div style="text-align: center;">  </div> <p style="text-align: right;">3 Flammable liquids.<br/>3</p> |
| <ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <p style="text-align: right;">III</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> </ul>   | <p style="text-align: right;">Product contains environmentally hazardous substances:<br/>bis[4-(2,3-epoxypropoxy)phenyl]propane</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> <li>· <b>Stowage Category</b></li> </ul> | <p style="text-align: right;">Warning: Flammable liquids.<br/>30<br/>F-E,S-D<br/>Liquid halogenated hydrocarbons<br/>A</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>  | <p style="text-align: right;">Not applicable.</p>   |
| <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>  | <p style="text-align: right;">5L<br/>Code: E1<br/>Maximum net quantity per inner packaging: 30 ml<br/>Maximum net quantity per outer packaging: 1000 ml</p>                               |
| <ul style="list-style-type: none"> <li>· <b>Transport category</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>  | <p style="text-align: right;">3<br/>D/E</p>   |

(Contd. on page 9)

GB



## Safety data sheet

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

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Version number 5.1 (replaces version 5.0)

Revision: 12.12.2021

**Trade name: AR-PC 504**

(Contd. of page 8)

· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1134 CHLOROBENZENE, 3, III

### SECTION 15: Regulatory information

#### · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: (Substances not listed)

None of the ingredients is listed.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**  
E2 Hazardous to the Aquatic Environment  
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations:**
- **VOC (EU)** 0.0 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

#### · **Disclaimer**

This safety data sheet contains only safety relevant information. The information is based on the state of our knowledge at the time of revision, however, it does not constitute a guarantee of product properties, product information or product specifications and does not establish a contractual legal relationship. This document is only valid in its unchanged form. In the event of changes by third parties, the exhibitor accepts no responsibility for form and content or for any damages or claims arising from such changes. The information is not transferable to other products. If the product named in this safety data sheet is mixed, blended or processed with other materials or is subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise. The data sheet does not release the user from the obligation to ensure that he acts in accordance with all regulations in connection with his activity.

#### · **Relevant phrases**

H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H411 Toxic to aquatic life with long lasting effects.

#### · **Department issuing SDS:** Quality Management department

#### · **Contact:** MSDS authorized Person

#### · **Abbreviations and acronyms:**

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

(Contd. on page 10)

**Safety data sheet**  
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Revision: 12.12.2021

**Trade name: AR-PC 504**

(Contd. of page 9)

*ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 3: Flammable liquids – Category 3**Acute Tox. 4: Acute toxicity – Category 4**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Skin Sens. 1: Skin sensitisation – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*

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