

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

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

- **1.1 Product identifier**
- **Trade name** **BRAWO RR - Komponente B**
- **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** Epoxy sealing  
Hardening agent/ Curing agent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** BRAWO SYSTEMS GmbH  
Blechhammerweg 13-17  
67659 Kaiserslautern  
Deutschland/Germany
- Tel: +49(0)631-205 61 100
- **Informing department:** Technische Abteilung  
msds@brawoliner.de
- **1.4 Emergency telephone number:** +49 (0) 61 31 - 19 240 (Giftnotruf Mainz)




### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Skin Corr. 1B	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Repr. 2	H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

---

- **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	GHS07	GHS08

- **Signal word** Danger

(Contd. on page 2)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 1)

- **Hazard-determining components of labelling:** *Formaldehyde, oligomeric reaction products with 3,3'-iminodi(propylamine)  
1,3-Cyclohexanedimethanamine  
2-piperazin-1-ylethylamine  
polymer amine terminated  
2,4,6-Tris-(1-Phenyl-Ethyl) carboic acid*
- **Hazard statements**
  - H302 Harmful if swallowed.
  - H312 Harmful in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H317 May cause an allergic skin reaction.
  - H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
  - H373 May cause damage to organs through prolonged or repeated exposure.
  - H412 Harmful 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.
  - P260 Do not breathe dusts or mists.
  - 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.
  - P310 Immediately call a POISON CENTER/doctor.
  - P321 Specific treatment (see on this label).
  - 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 consisting of the following components.

· **Dangerous components:**

CAS: 161278-35-9	<i>Formaldehyde, oligomeric reaction products with 3,3'-iminodi(propylamine) Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332</i>	10-30%
------------------	--	--------

(Contd. on page 3)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 2)

EC number: 949-140-2	polymer amine terminated Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1B, H317	10-30%
CAS: 2579-20-6 EINECS: 219-941-5	1,3-Cyclohexanedimethanamine Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥10-<25%
CAS: 100-51-6	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319	10-30%
CAS: 140-31-8 EINECS: 205-411-0	2-piperazin-1-ylethylamine Repr. 2, H361fd; STOT RE 1, H372; Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥5-<10%
CAS: 61788-44-1 EINECS: 262-975-0	2,4,6-Tris-(1-Phenyl-Ethyl) carboic acid Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥2.5-<10%
CAS: 69-72-7 EINECS: 200-712-3	salicylic acid Repr. 2, H361d; Eye Dam. 1, H318; Acute Tox. 4, H302	≥1-<1.5%

· **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** Remove contaminated clothing immediately. Consult a doctor if symptoms occur. Move affected person to fresh air.
- **After inhalation** Supply fresh air; seek medical advice if symptoms occur.  
If unconscious, place in recovery position and seek medical advice.
- **After skin contact** In case of contact with skin, wash carefully with plenty of soap and water. Consult a doctor in case of skin reactions.
- **After eye contact** Rinse opened eye for several minutes under running water.  
Call a doctor immediately
- **After swallowing** Rinse mouth with water. Never give anything by mouth to an unconscious person. DO NOT induce vomiting. If symptoms persist, consult a doctor.

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

Advice for the doctor: Elementary aid, decontamination, symptomatic treatment.

### 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** No further relevant information available.

(Contd. on page 4)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

Trade name **BRAWO RR - Komponente B**

(Contd. of page 3)

- **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:** Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralising agent.  
Dispose of 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 information on disposal.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Open and handle containers with care.  
Ventilation measures are required in rooms without sufficient air exchange (e.g. closed rooms), because the occupational exposure limit values (see chapter 8) could be exceeded. This must be avoided.  
Wear suitable personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Change contaminated or damaged gloves and contaminated clothing immediately and wash skin immediately. Mix slowly, partially covering the mixing container. Pour carefully and slowly when repotting. Observe the BGBau technical data sheet and practical guide for handling epoxy resins.
- **Information about protection against explosions and fires:** Ensure sufficient air exchange and/or extraction in the working areas. Take precautionary measures to avoid electrostatic discharges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Further information about storage conditions:** Protect from heat and direct sunlight.

(Contd. on page 5)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

Trade name **BRAWO RR - Komponente B**

· Storage class

8A

(Contd. of page 4)

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with critical 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.*

· **DNELs**

**CAS: 2579-20-6 1,3-Cyclohexanedimethanamine**

Inhalative DNEL 0.00947 mg/m<sup>3</sup> (Workers)

**CAS: 100-51-6 Benzyl alcohol**

Oral	DNEL	4 mg/kg bw/Tag (ArL) 20 mg/kg bw/Tag (Ark)
Dermal	DNEL	8 mg/kg bw/day (ArL) 40 mg/kg bw/day (Ark)
Inhalative	DNEL	22 mg/m <sup>3</sup> (ArL) 110 mg/m <sup>3</sup> (Ark)

**CAS: 140-31-8 2-piperazin-1-ylethylamine**

Dermal	DNEL	3.33 mg/kg bw/day (ArL)
Inhalative	DNEL	10.6 mg/m <sup>3</sup> (ArL)

· **PNECs**

**CAS: 2579-20-6 1,3-Cyclohexanedimethanamine**

PNEC	0.003 mg/l (Mew)
PNEC	0.033 mg/l (Fresh water)

**CAS: 100-51-6 Benzyl alcohol**

PNEC	0.527 mg/l (Marine water sediment) 0.1 mg/l (Mew) 1 mg/l (Fresh water sediment)
PNEC	0.456 mg/kg dwt (Bod) 5.27 mg/kg dwt (Fresh water sediment)

**CAS: 140-31-8 2-piperazin-1-ylethylamine**

PNEC	250 mg/l (Kla) 0.0058 mg/l (Mew) 0.058 mg/l (Freshwater)
PNEC	1 mg/kg dwt (Bod) 21.5 mg/kg dwt (Sediment) 215 mg/kg dwt (Fresh water sediment)

- **Additional information:** *The lists that were valid during the compilation were used as basis.*

(Contd. on page 6)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 5)

- **8.2 Exposure controls**
- **Appropriate engineering controls** *No further data; see section 7.*
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures** *Keep away from food, drink and animal feed.  
Remove soiled, soaked clothing immediately.  
Wash hands before breaks and at the end of work.  
Avoid contact with eyes and skin.*
- **Breathing equipment:** *If workplace limit values cannot be complied with by ventilation measures or if rooms cannot be technically ventilated, respiratory protection must be worn: Use combination filter A1-P2 (brown/white) in rooms that cannot be ventilated. If oxygen deficiency is expected, use self-contained breathing apparatus. Observe wearing time limits according to §9 (3) GefStoffV in conjunction with BGR 190.*
- **Hand protection** *Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*
- **Material of gloves** *You can find help with choosing gloves on the website <https://www.bgbau.de/fileadmin/Gisbau/Projekte.pdf>  
For example, we recommend the Sol-vex 37-900 protective gloves from Ansell GmbH. The breakthrough time of the protective gloves can be found under point 8 "Penetration time of the glove material". The selection of a suitable glove depends not only on the material, but also on other quality features and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.  
Nitrile rubber  
Recommended material thickness:  $\geq 0.4$  mm*
- **Penetration time of glove material** *The breakthrough times of the Sol-vex 37-900 protective gloves are around 8 hours.  
The following applies to all other gloves:  
The exact breakthrough time must be obtained from the protective glove manufacturer and adhered to.  
Nitrile rubber  
Material thickness:  $\geq 0.40$  mm  
Penetration time:  $\geq 480$  min  
Butyl rubber:  
Material thickness:  $\geq 0.5$  mm  
Penetration time:  $\geq 480$  min*
- **Eye/face protection** *Tight-fitting safety goggles.  
Safety goggles.*
- **Body protection:** *Protective clothing  
Suitable protective clothing should be worn when working with epoxy resins. In addition to normal work clothing (long trousers, long-sleeved shirt or T-shirt), disposable overalls, aprons, overshoes, sleeve protectors etc. may be necessary depending on the activity. Uncovered areas of skin should be avoided as far as*

(Contd. on page 7)



## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 6)

possible, even in hot weather. If the work involves kneeling, the lower leg area should be protected by protective trousers.

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

· <b>Colour:</b>	Dark brown
· <b>Smell:</b>	Amine-like
· <b>Melting point/freezing point:</b>	Not determined
· <b>Boiling point or initial boiling point and boiling range</b>	232 °C
· <b>Flash point:</b>	110 °C
· <b>Auto-ignition temperature:</b>	380 °C
· <b>pH</b>	Not applicable. Not determined.
· <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>Steam pressure at 20 °C:</b>	0.1 hPa
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C</b>	0.96 g/cm <sup>3</sup>

#### · 9.2 Other information

· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Self-inflammability:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive.

#### · Information with regard to physical hazard classes

· <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>	Void
· <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

(Contd. on page 8)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 7)

· <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.
- **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** Harmful if swallowed.  
Harmful in contact with skin.

· **LD/LC50 values that are relevant for classification:**

**CAS: 2579-20-6 1,3-Cyclohexanedimethanamine**

Oral	LD50	700 mg/kg (rat)
Dermal	LD50	1700 mg/kg (rat)

**CAS: 100-51-6 Benzyl alcohol**

Oral	LD50	1230 mg/kg (rat)
	NOAEL 2nd year study	200 mg/kg (mouse) 200 mg/kg (rat)
	Dermal	LD50
Inhalative	LC50/4 h	>4178 mg/l (rat)

**CAS: 140-31-8 2-piperazin-1-ylethylamine**

Oral	LD50	2000-5000 mg/kg (rat)
		500 mg/kg (rabbit)
Dermal	LD50	200-1000 mg/kg (rabbit)

**CAS: 69-72-7 salicylic acid**

Oral	LD50	891 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.

(Contd. on page 9)



## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 8)

- **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**        *Suspected of damaging fertility. Suspected of damaging the unborn child.*
- **STOT-single exposure**        *Based on available data, the classification criteria are not met.*
- **STOT-repeated exposure**    *May cause damage to organs through prolonged or repeated exposure.*
- **Aspiration hazard**            *Based on available data, the classification criteria are not met.*
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

CAS: 61788-44-1	2,4,6-Tris-(1-Phenyl-Ethyl) carboic acid	List II
CAS: 69-72-7	salicylic acid	List II; III

### SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

**CAS: 2579-20-6 1,3-Cyclohexanedimethanamine**

EC50/24h 90 mg/l (*Pseudokirchneriella subcapitata*)

EC50 90 mg/l (*Pseudomonas putida*)

LC50/48h 130 mg/l (*Leucidus idus*)

**CAS: 100-51-6 Benzyl alcohol**

IC50/72h 700 mg/l (algae)

LC50/96h 460 mg/l (*Pimephales promelas*)

10 mg/l (*Lepomis macrochirus*)

**CAS: 140-31-8 2-piperazin-1-ylethylamine**

EC50/72h >1000 mg/l (algae)

LC50/96h 2190 mg/l (fish)

· **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**

· **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**

· **Remark:**                        *Toxic for fish*

· **Additional ecological information:**

· **General notes:**                *Toxic for aquatic organisms*

*Must not reach sewage water or drainage ditch undiluted or unneutralised.*

(Contd. on page 10)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 9)

Also poisonous for fish and plankton in water bodies.  
Do not allow product to reach ground water, water bodies or sewage system.  
Danger to drinking water if even small quantities leak into soil.

### 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.

**· Waste disposal key number:** 55352  
Bez.: aliphatische Amine  
Entsorgungshinweise:  
Sonderabfallverbrennung

**· Uncleaned packagings:**

**· Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

### SECTION 14: Transport information

**· 14.1 UN number or ID number**

**· ADR, IMDG, IATA** UN1760

**· 14.2 UN proper shipping name**

**· ADR, IMDG, IATA** CORROSIVE LIQUID, N.O.S. (1,3-Cyclohexanedimethanamine, N-AMINOETHYLPIPERAZINE)

**· 14.3 Transport hazard class(es)**

**· ADR**  
**· Class** 8 (C9) Corrosive substances.  
**· Label** 8

**· IMDG, IATA**

**· Class** 8 Corrosive substances.  
**· Label** 8

**· 14.4 Packing group**

**· ADR, IMDG, IATA** II

**· 14.5 Environmental hazards:**

**· Marine pollutant:** No

**· 14.6 Special precautions for user**

**· Warning:** Corrosive substances.  
**· Kemler Number:** 80  
**· EMS Number:** F-A, S-B  
**· Segregation groups** (SGG18) Alkalis

(Contd. on page 11)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

**Trade name BRAWO RR - Komponente B**

(Contd. of page 10)

· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>Transport/Additional information:</b>	
-----	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	E
-----	
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUID, N.O.S. (1,3-CYCLOHEXANEDIMETHANAMINE, N-AMINOETHYLPIPERAZINE), 8, II

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture** No further relevant information available.
- **Poisons Act**

· **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.

· **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

- **Relevant phrases** H302 Harmful if swallowed.

(Contd. on page 12)

## Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 11.05.2024

Version number 43 (replaces version 42)

Revision: 05.05.2024

Trade name **BRAWO RR - Komponente B**

(Contd. of page 11)

H312 Harmful in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H361d Suspected of damaging the unborn child.  
 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
 H372 Causes damage to organs through prolonged or repeated exposure.  
 H411 Toxic to aquatic life with long lasting effects.  
 H412 Harmful to aquatic life with long lasting effects.

· **Department issuing data specification sheet:**

· **Abbreviations and acronyms:**

Environment protection department.

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

ICAO: International Civil Aviation Organisation

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

ELINCS: European List of Notified Chemical Substances

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

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

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

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Repr. 2: Reproductive toxicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **\* Data compared to the previous version altered.**