

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

Printing date 04.07.2023

Version 1.1 (replaces version 1.0)

Revision: 04.07.2023

**SECTION 1: Identification of the substance/mixture and of the company/
undertaking****1.1 Product identifier**Trade name: **Ozaphan - FHBD Microfilm Developer**

Article number: 13860

UFI: 2SN0-N0T4-V002-W31Q

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.**1.3 Application of the substance / the mixture**

Micrography

Use by commercial operations

Photographic chemicals

Photographic developer or fixer

Processing of microfilms

1.4 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

GENUS – Vertriebsbüro EU

Kurt-Schumacher-Ring 67

63329 Egelsbach

DEUTSCHLAND

Tel.: +49 6103 481897

E-Mail: clauspeteriff@genusit.com

Informing department:

Tel.: +49 (0)39291 42515

E-Mail: rs@calbe-chemie.de

1.5 Emergency telephone number:

Tel.: +49 (0) 700-24112112 (CAL)

Tel.: +1 872 5888271(CAL)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS08 health hazard

Muta. 2

H341 Suspected of causing genetic defects.

Carc. 2

H351 Suspected of causing cancer.



GHS05 corrosion

Eye Dam. 1

H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

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GHS07

Skin Irrit. 2 H315 Causes skin irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.

· **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**



GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

hydroquinone
 potassium hydroxide
 4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one

· **Hazard statements**

H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H351 Suspected of causing cancer.
 H400 Very toxic to aquatic life.

· **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash thoroughly after handling.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 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.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 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.

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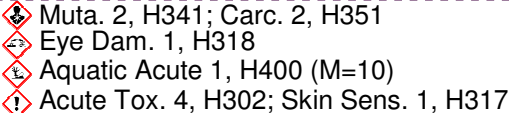
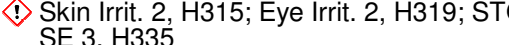
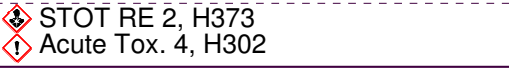
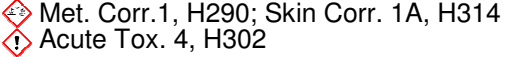
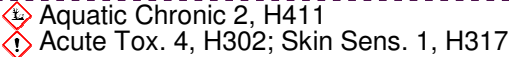
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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 123-31-9 EINECS: 204-617-8	hydroquinone 	5 - 10%
CAS: 584-08-7 EINECS: 209-529-3	potassium carbonate 	2 - 5%
CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxybisethanol 	2 - 5%
CAS: 1310-58-3 EINECS: 215-181-3	potassium hydroxide  <p>Specific concentration limits: Skin Corr. 1A;H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %</p>	≥ 0.5 - < 2%
CAS: 13047-13-7 EINECS: 235-920-3	4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one 	≥ 0.25 - < 0.5%

· **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**

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 24 hours after the accident.

Personal protection for the First Aider.

· **After inhalation** Take affected persons into the open air and position comfortably

· **After skin contact**

Instantly wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact**

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

Remove contact lenses, if present and easy to do.

Protect uninjured eye.

Call a doctor immediately.

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- **After swallowing**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; instantly call for medical help.
- **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**
CO₂, extinguishing powder or water jet. Fight larger fires with water spray jet or alcohol-resistant foam.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire
Sulphur oxides (SO_x)
Nitrogen oxides (NO_x)
Carbon monoxide
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained breathing apparatus.
Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
- **6.2 Environmental precautions:**
Do not allow to enter drainage system, 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 of contaminated material as waste according to item 13.
- **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**
Wear protective clothing.
Use only in well ventilated areas.
Do not inhale gases / fumes / aerosols.
Ensure good ventilation/exhaustion at the workplace.

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- Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store only in the original container.
Keep container tightly closed in a cool, well-ventilated place.
- **Information about storage in one common storage facility:**
Keep away from foodstuffs, beverages and food.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in a cool place.
- **Recommended storage temperature:** 5-25°C
- **Storage class** 12
- **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.

123-31-9 hydroquinone	
OEL (Ireland)	Long-term value: 0.5 mg/m ³ Sens
111-46-6 2,2'-oxybisethanol	
OEL (Ireland)	Long-term value: 100 mg/m ³ , 23 ppm
1310-58-3 potassium hydroxide	
OEL (Ireland)	Short-term value: 2 mg/m ³

- **Additional information:**
The lists that were valid during the compilation were used as basis.
- **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**
Wash contaminated clothing before reuse.
The usual precautionary measures should be adhered to general rules for handling chemicals.
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.

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· **Breathing equipment:**

Use breathing protection only when aerosol or mist is formed.

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

· **Hand protection**

Protective gloves.

The protective gloves to be used must comply with the specifications of the (EU) 2016/425 and the resultant standard EN 374.

This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

Only use chemical-protective gloves with CE-labelling of category III.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Thickness	Breakthrough time	
	(mm)	(min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.

· **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Value for the permeation: Level:

≥ 3 (60 min)

· **Eye/face protection** Tightly sealed safety glasses.

· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Physical state**

Fluid

· **Colour:**

Light yellow

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Not determined

· **Boiling point or initial boiling point and boiling range**

< 100 °C

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

Not applicable

· **Decomposition temperature:**

Not determined.

· **pH at 20 °C**

10.2

· **Viscosity:**

· **Kinematic viscosity**

Not determined

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· dynamic:	Not determined
· Solubility	
· Water:	miscible
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20 °C	1.19 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive.
· Solvent content:	
· Organic solvents:	~ 43 %
· Change in condition	
· Softening point/range	
· Oxidising properties	None
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Protect from heat and direct sunlight.
- **10.3 Possibility of hazardous reactions** Reacts with strong acids
- **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** Based on available data, the classification criteria are not met.

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

ATE (Acute Toxicity Estimates)

Oral	LD50	4,044 mg/kg (rat)
------	------	-------------------

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **Germ cell mutagenicity** Suspected of causing genetic defects.
- **Carcinogenicity** Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure**
Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
At present there are no animal experimental data.
The pH is used as classification criteria in accordance with Regulation (EC) no. 1272/2008.
This statement was deduced from the properties of the single components.

- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Other information** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

- **12.7 Other adverse effects**

- **Ecotoxic effects:** No further relevant information available.

- **Remark:** Very toxic for fish

- **Behaviour in sewage processing plants:** Not determined

- **Additional ecological information:**

- **General notes:**

This statement was deduced from the properties of the single components.

The product contains materials that are harmful to the environment.

Water hazard class 3 (German Regulation) (Self-assessment): highly water-endangering.

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Danger to drinking water if even small quantities leak into soil.

At present there are no ecotoxicological assessments.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Very toxic for aquatic organisms

The product does not contain organically bounded halogens (AOX-free).

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.

Must be specially treated under adherence to official regulations.

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

- **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals
16 05 08*	discarded organic chemicals consisting of or containing hazardous substances
HP4	Irritant - skin irritation and eye damage
HP7	Carcinogenic
HP11	Mutagenic
HP14	Ecotoxic

- **Uncleaned packagings:**

- **Recommendation:**

Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

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Non contaminated packagings can be used for recycling.
 Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR/RID, IMDG, IATA** UN3082

· **14.2 UN proper shipping name**

· **ADR/RID, IMDG, IATA** ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S. (hydroquinone)

· **14.3 Transport hazard class(es)**

· **ADR/RID, IATA**



· **Class** 9 Miscellaneous dangerous substances and articles.

· **Label** 9

· **IMDG**



· **Class** 9 Miscellaneous dangerous substances and articles.

· **Label** 9

· **14.4 Packing group**

· **ADR/RID, IMDG, IATA** III

· **14.5 Environmental hazards:** Product contains environmentally hazardous substances: hydroquinone

· **Marine pollutant:** Yes

· **Special marking (ADR/RID):** Symbol (fish and tree)

· **Special marking (IATA):** Symbol (fish and tree)

· **14.6 Special precautions for user** Warning: Miscellaneous dangerous substances and articles.

· **Kemler Number:** 90

· **EMS Number:** F-A,S-F

· **Stowage Category** A

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

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· **Transport/Additional information:**

· **ADR/RID**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

3

· **Tunnel restriction code**

(-)

· **Remarks:**

"Limited quantity" according to chapter 3.4 ADR, if carried in combination packagings with not more than 5 litres per inner packaging and not more than 30 kg per package.

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Remarks:**

"Limited quantity" according to chapter 3.4 IMDG, if carried in combination packagings with not more than 5 litres per inner packaging and not more than 30 kg per package.

· **UN "Model Regulation":**

UN 3082 ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S.
 (HYDROQUINONE), 9, III

SECTION 15: Regulatory information

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

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

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

· **Hazard pictograms**



GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

hydroquinone

potassium hydroxide

4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one

· **Hazard statements**

H315 Causes skin irritation.

H318 Causes serious eye damage.

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- H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H351 Suspected of causing cancer.
 H400 Very toxic to aquatic life.

· **Precautionary statements**

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash thoroughly after handling.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 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.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 · **Seveso category E1** Hazardous to the Aquatic Environment
 · **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
 · **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
 · **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

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.

· **National regulations**

· **Information about limitation of use:**

Employment restrictions concerning pregnant and lactating women must be observed.

· **Decree to be applied in case of technical fault:**

Class	Share in %
I	6.7
NK	4.1

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- **Water hazard class:**
Water danger class 3 (Self-assessment): highly water-endangering.
- **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.

- **Relevant phrases**

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- 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.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

- **Version number of previous version: 1.0**

- **Abbreviations and acronyms:**

- 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Met. Corr.1: Corrosive to metals – Category 1
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1A: Skin corrosion/irritation – Category 1A
- 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
- Muta. 2: Germ cell mutagenicity – Category 2
- Carc. 2: Carcinogenicity – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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

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· **Sources**

applicable EEC directives:

- 1907/2006

- 1272/2008

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance (GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

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