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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 01.11.2021 / 0004
Replacing version dated / version: 08.09.2020 / 0003
Valid from: 01.11.2021
PDF print date: 01.11.2021
PAG Klimaanlage 46 R-1234 YF

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

PAG Klimaanlage 46 R-1234 YF

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

Relevant identified uses of the substance or mixture:

Lubricant

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

GB

Landspítali- The National University Hospital of Iceland, tel. +354 543 2222 or 112 (valid only for Iceland)

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)
+1 872 5888271 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement |
|-----------------|-----------------|---|
| Skin Sens. | 1 | H317-May cause an allergic skin reaction. |
| Aquatic Chronic | 3 | H412-Harmful to aquatic life with long lasting effects. |

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

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Warning

H317-May cause an allergic skin reaction. H412-Harmful to aquatic life with long lasting effects.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.
P261-Avoid breathing vapours or spray. P280-Wear protective gloves.
P333+P313-If skin irritation or rash occurs: Get medical advice / attention.
P501-Dispose of contents / container to an approved waste disposal facility.

p-tert-butylphenyl 1-(2,3-epoxy)propyl ether

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

| | |
|--|---|
| p-tert-butylphenyl 1-(2,3-epoxy)propyl ether | |
| Registration number (REACH) | --- |
| Index | --- |
| EINECS, ELINCS, NLP, REACH-IT List-No. | 221-453-2 |
| CAS | 3101-60-8 |
| content % | 1-2,5 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Skin Sens. 1, H317 Aquatic Chronic 2, H411 |

| | |
|--|--|
| 2,6-di-tert-butyl-p-cresol | |
| Registration number (REACH) | --- |
| Index | --- |
| EINECS, ELINCS, NLP, REACH-IT List-No. | 204-881-4 |
| CAS | 128-37-0 |
| content % | <1 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) |

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

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SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

Inhalation

Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Give copious water to drink - consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Adapt to the nature and extent of fire.

Unsuitable extinguishing media

None known

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Toxic gases

5.3 Advice for firefighters

For personal protective equipment see Section 8.

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

Full protection, if necessary.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

If leakage occurs, dam up.

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Resolve leaks if this possible without risk.
 Prevent from entering drainage system.
 Prevent surface and ground-water infiltration, as well as ground penetration.
 If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
 Avoid contact with eyes or skin.
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
 Observe directions on label and instructions for use.
 Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities


Keep out of access to unauthorised individuals.
 Not to be stored in gangways or stair wells.
 Store product closed and only in original packing.
 Store at room temperature.

7.3 Specific end use(s)

No information available at present.
 Observe the instructions for good working practice and the recommendations for risk assessment.
 Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| | | | | |
|--|----------------------|----------------------------|--|-----|
|  | Chemical Name | 2,6-di-tert-butyl-p-cresol | | |
| WEL-TWA: 10 mg/m3 | | WEL-STEL: --- | | --- |
| Monitoring procedures: | | --- | | |
| BMGV: --- | | Other information: --- | | |

| 2,6-di-tert-butyl-p-cresol | | | | | | |
|----------------------------|--|------------------|------------|-------|----------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - soil | | PNEC | 1,04 | mg/kg ww | |
| | Environment - sewage treatment plant | | PNEC | 0,017 | mg/l | |
| | Environment - sediment | | PNEC | 1,29 | mg/kg ww | |
| | Environment - marine | | PNEC | 0,02 | µg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 1,99 | µg/l | |
| | Environment - freshwater | | PNEC | 0,199 | µg/l | |

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| | | | | | | |
|---------------------|------------------------------------|-----------------------------|------|-------|--------------|--|
| | Environment - oral (animal feed) | | PNEC | 16,67 | mg/kg feed | |
| | Environment - soil | | PNEC | 0,054 | mg/kg dw | |
| | Environment - sediment, freshwater | | PNEC | 0,458 | mg/kg dw | |
| | Environment - sediment, marine | | PNEC | 0,046 | mg/kg dw | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 0,435 | mg/m3 | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 0,25 | mg/kg bw/d | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 0,25 | mg/kg bw/day | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 1,76 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 0,5 | mg/kg bw/day | |

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (11) = Inhalable fraction (2004/37/EC). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/EC). |
 | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
 | BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
 | Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/EC), (14) = The substance can cause sensitisation of the skin (2004/37/EC). |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
 Applies only if maximum permissible exposure values are listed here.
 Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
 These are specified by e.g. EN 14042.
 EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
 Protective goggles (EN 166)

Skin protection - Hand protection:
 Protective nitrile gloves (EN ISO 374).
 Protective Neoprene® / polychloroprene gloves (EN ISO 374).
 Protective PVC gloves (EN ISO 374).
 Minimum layer thickness in mm:

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$\geq 0,13$

Permeation time (penetration time) in minutes:

≥ 60

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

Normally not necessary.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---|--|
| Physical state: | Liquid |
| Colour: | Yellow |
| Odour: | Characteristic |
| Melting point/freezing point: | There is no information available on this parameter. |
| Boiling point or initial boiling point and boiling range: | There is no information available on this parameter. |
| Flammability: | Flammable |
| Lower explosion limit: | There is no information available on this parameter. |
| Upper explosion limit: | There is no information available on this parameter. |
| Flash point: | $>230^{\circ}\text{C}$ |
| Auto-ignition temperature: | There is no information available on this parameter. |
| Decomposition temperature: | There is no information available on this parameter. |
| pH: | Mixture is non-soluble (in water). |
| Kinematic viscosity: | 44,6 mm ² /s |
| Solubility: | Insoluble |
| Partition coefficient n-octanol/water (log value): | Does not apply to mixtures. |
| Vapour pressure: | There is no information available on this parameter. |
| Density and/or relative density: | 0,9895 g/cm ³ (20°C) |
| Relative vapour density: | There is no information available on this parameter. |
| Particle characteristics: | Does not apply to liquids. |

9.2 Other information

| | |
|--------------------|---------------------------|
| Explosives: | Product is not explosive. |
| Oxidising liquids: | No |

SECTION 10: Stability and reactivity

10.1 Reactivity

Not to be expected

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

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No dangerous reactions are known.

10.4 Conditions to avoid

See also section 7.

None known

10.5 Incompatible materials

None known

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

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

Possibly more information on health effects, see Section 2.1 (classification).

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| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|---|----------|-------|------|----------|-------------|--------|
| Acute toxicity, by oral route: | | | | | | n.d.a. |
| Acute toxicity, by dermal route: | | | | | | n.d.a. |
| Acute toxicity, by inhalation: | | | | | | n.d.a. |
| Skin corrosion/irritation: | | | | | | n.d.a. |
| Serious eye damage/irritation: | | | | | | n.d.a. |
| Respiratory or skin sensitisation: | | | | | | n.d.a. |
| Germ cell mutagenicity: | | | | | | n.d.a. |
| Carcinogenicity: | | | | | | n.d.a. |
| Reproductive toxicity: | | | | | | n.d.a. |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | n.d.a. |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | n.d.a. |
| Aspiration hazard: | | | | | | n.d.a. |
| Symptoms: | | | | | | n.d.a. |

p-tert-butylphenyl 1-(2,3-epoxy)propyl ether

| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|------------------------------------|----------|-------|-------|----------|--|--------------|
| Acute toxicity, by oral route: | LD50 | >2000 | mg/kg | Rat | OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure) | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rat | OECD 402 (Acute Dermal Toxicity) | |
| Skin corrosion/irritation: | | | | | | Not irritant |
| Serious eye damage/irritation: | | | | | | Not irritant |
| Respiratory or skin sensitisation: | | | | | | Sensitising |

2,6-di-tert-butyl-p-cresol

| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|---|----------|-------|------------|-------------|--|-------------------|
| Acute toxicity, by oral route: | LD50 | >2930 | mg/kg | Rat | OECD 401 (Acute Oral Toxicity) | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant |
| Serious eye damage/irritation: | | | | Rabbit | (Draize-Test) | Not irritant |
| Respiratory or skin sensitisation: | | | | Human being | | No (skin contact) |
| Germ cell mutagenicity: | | | | | (Ames-Test) | Negative |
| Germ cell mutagenicity: | | | | Mouse | in vivo | Negative |
| Carcinogenicity: | NOAEL | 247 | mg/kg bw/d | Rat | | Negative |
| Reproductive toxicity (Developmental toxicity): | NOAEL | 100 | mg/kg | Rat | | |

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| | | | | | | |
|---|-------|-----|-------|-----|--|----------------------------|
| Reproductive toxicity (Effects on fertility): | NOAEL | 500 | mg/kg | Rat | | |
| Specific target organ toxicity - repeated exposure (STOT-RE): | NOEL | 25 | mg/kg | Rat | | (28 d) |
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | mucous membrane irritation |

11.2. Information on other hazards

| PAG Klimaanlage 46 R-1234 YF | | | | | | |
|----------------------------------|----------|-------|------|----------|-------------|---|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Endocrine disrupting properties: | | | | | | Does not apply to mixtures. |
| Other information: | | | | | | No other relevant information available on adverse effects on health. |

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

| PAG Klimaanlage 46 R-1234 YF | | | | | | | |
|--|----------|------|-------|------|----------|-------------|---|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | | | | | | | n.d.a. |
| 12.1. Toxicity to daphnia: | | | | | | | n.d.a. |
| 12.1. Toxicity to algae: | | | | | | | n.d.a. |
| 12.2. Persistence and degradability: | | | | | | | n.d.a. |
| 12.3. Bioaccumulative potential: | | | | | | | n.d.a. |
| 12.4. Mobility in soil: | | | | | | | n.d.a. |
| 12.5. Results of PBT and vPvB assessment | | | | | | | n.d.a. |
| 12.6. Endocrine disrupting properties: | | | | | | | Does not apply to mixtures. |
| 12.7. Other adverse effects: | | | | | | | No information available on other adverse effects on the environment. |

| p-tert-butylphenyl 1-(2,3-epoxy)propyl ether | | | | | | | |
|--|----------|------|-------|------|---------------------------------|--|-------------------------------------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | LC50 | 96h | 7,5 | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test) | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 67,9 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to algae: | EC50 | 72h | 9 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |

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| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
|--|-----------|------|----------|------|-------------------------|--|---|
| 12.1. Toxicity to fish: | NOEC/NOEL | 42d | 0,053 | mg/l | Oryzias latipes | OECD 210 (Fish, Early-Life Stage Toxicity Test) | |
| 12.1. Toxicity to fish: | LC50 | 96h | >0,57 | mg/l | Brachydanio rerio | 84/449/EEC C.1 | |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d | 0,023 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 0,45 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to algae: | EC50 | 72h | >0,4 | mg/l | Desmodesmus subspicatus | 84/449/EEC C.3 | |
| 12.1. Toxicity to algae: | EC50 | 72h | 0,5 | mg/l | Desmodesmus subspicatus | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.1. Toxicity to algae: | NOEC/NOEL | 72h | 0,4 | mg/l | Desmodesmus subspicatus | 84/449/EEC C.3 | |
| 12.2. Persistence and degradability: | | 28d | 4,5 | % | | OECD 301 C (Ready Biodegradability - Modified MITI Test (I)) | Not readily biodegradable |
| 12.3. Bioaccumulative potential: | Log Pow | | 5,1 | | | | High |
| 12.3. Bioaccumulative potential: | BCF | | 330-1800 | | Cyprinus caprio | OECD 305 (Bioconcentration - Flow-Through Fish Test) | |
| 12.3. Bioaccumulative potential: | | | 230-2500 | | Cyprinus carpio | OECD 305 (Bioconcentration - Flow-Through Fish Test) | 56d |
| 12.4. Mobility in soil: | Log Koc | | 3,9-4,2 | | | | |
| 12.4. Mobility in soil: | Koc | | 14750 | | | | |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| Toxicity to bacteria: | EC50 | 3h | >10000 | mg/l | activated sludge | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | |
| Other information: | Koc | | 14750 | | | | |
| Other information: | Log Koc | | 3,9-4,2 | | | | |
| Other information: | AOX | | | | | | Does not contain any organically bound halogens which can contribute to the AOX value in waste water. |
| Water solubility: | | | 0,00076 | g/l | | | |

SECTION 13: Disposal considerations

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13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

13 07 03 other fuels (including mixtures)

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name:

Not applicable

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

14.5. Environmental hazards: Not applicable

Tunnel restriction code: Not applicable

Classification code: Not applicable

LQ: Not applicable

Transport category: Not applicable

Transport by sea (IMDG-code)

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name:

Not applicable

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

14.5. Environmental hazards: Not applicable

Marine Pollutant: Not applicable

EmS: Not applicable

Transport by air (IATA)

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name:

Not applicable

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Maritime transport in bulk according to IMO instruments

Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

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

Observe restrictions:

Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!

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Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 0 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1-16

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used |
|---|--|
| Skin Sens. 1, H317 | Classification according to calculation procedure. |
| Aquatic Chronic 3, H412 | Classification according to calculation procedure. |

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.

H317 May cause an allergic skin reaction.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

Skin Sens. — Skin sensitization

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Aquatic Acute — Hazardous to the aquatic environment - acute

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidelines for the preparation of safety data sheets as amended (ECHA).

Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets for the constituent substances.

ECHA Homepage - Information about chemicals.

GESTIS Substance Database (Germany).

German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).

EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.

National Lists of Occupational Exposure Limits for each country as amended.

Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ASTM ASTM International (American Society for Testing and Materials)

ATE Acute Toxicity Estimate

BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

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BSEF The International Bromine Council
 CAS Chemical Abstracts Service
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 DOC Dissolved organic carbon
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EbCx, EyCx, EBLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
 EC European Community
 ECHA European Chemicals Agency
 ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
 EEC European Economic Community
 EINECS European Inventory of Existing Commercial Chemical Substances
 ELINCS European List of Notified Chemical Substances
 EN European Norms
 EPA United States Environmental Protection Agency (United States of America)
 ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
 etc. et cetera
 EU European Union
 EVAL Ethylene-vinyl alcohol copolymer
 Fax. Fax number
 gen. general
 GHS Globally Harmonized System of Classification and Labelling of Chemicals
 GWP Global warming potential
 Koc Adsorption coefficient of organic carbon in the soil
 Kow octanol-water partition coefficient
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC (Code) International Bulk Chemical (Code)
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCLID International Uniform Chemical Information Database
 IUPAC International Union for Pure Applied Chemistry
 LC50 Lethal Concentration to 50 % of a test population
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
 Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
 Log Kow, Log Pow Logarithm of octanol-water partition coefficient
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships
 mg/kg bw mg/kg body weight
 mg/kg bw/d, mg/kg bw/day mg/kg body weight/day
 mg/kg dw mg/kg dry weight
 mg/kg wwt mg/kg wet weight
 n.a. not applicable
 n.av. not available
 n.c. not checked
 n.d.a. no data available
 NIOSH National Institute for Occupational Safety and Health (USA)
 NLP No-longer-Polymer
 NOEC, NOEL No Observed Effect Concentration/Level
 OECD Organisation for Economic Co-operation and Development
 org. organic
 OSHA Occupational Safety and Health Administration (USA)
 PBT persistent, bioaccumulative and toxic
 PE Polyethylene
 PNEC Predicted No Effect Concentration
 ppm parts per million
 PVC Polyvinylchloride
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

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RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SVHC Substances of Very High Concern

Tel. Telephone

TOC Total organic carbon

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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