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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 21.08.2015 / 0010
Replacing version dated / version: 28.11.2013 / 0009
Valid from: 21.08.2015
PDF print date: 21.08.2015
Molygen 5W-50 4 L
Art.: 2543

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

Molygen 5W-50 4 L
Art.: 2543

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

Relevant identified uses of the substance or mixture:

Lubricant

Sector of use [SU]:

SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

SU21 - Consumer uses: Private households (=general public = consumers)

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category [PC]:

PC17 - Hydraulic fluids

PC24 - Lubricants, greases, release products

Process category [PROC]:

PROC 1 - Use in closed process, no likelihood of exposure.

PROC 2 - Use in closed, continuous process with occasional controlled exposure

PROC 8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC 8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC 9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

ERC 4 - Industrial use of processing aids in processes and products, not becoming part of articles

ERC 7 - Industrial use of substances in closed systems

ERC 9a - Wide dispersive indoor use of substances in closed systems

ERC 9b - Wide dispersive outdoor use of substances in closed systems

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

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LIQUI MOLY GmbH, Jerg-Wieland-Str. 4, 89081 Ulm-Lehr, Germany

Phone: (+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:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

The mixture is not classified as dangerous in the terms of the Regulation (EC) 1272/2008 (CLP).

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2.2 Label elements

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

EUH210-Safety data sheet available on request.

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.

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

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

| Distillates (petroleum), hydrotreated heavy paraffinic | |
|---|-------------------|
| Registration number (REACH) | -- |
| Index | 649-467-00-8 |
| EINECS, ELINCS, NLP | 265-157-1 |
| CAS | 64742-54-7 |
| content % | 0-30 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Asp. Tox. 1, H304 |

| Baseoil - unspecified * | |
|---|-------------------|
| Registration number (REACH) | - |
| Index | --- |
| EINECS, ELINCS, NLP | - |
| CAS | --- |
| content % | 1-<10 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Asp. Tox. 1, H304 |

| Bis(nonylphenyl)amine | |
|---|-------------------------|
| Registration number (REACH) | 01-2119488911-28-XXXX |
| Index | --- |
| EINECS, ELINCS, NLP | 253-249-4 |
| CAS | 36878-20-3 |
| content % | 1-5 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Aquatic Chronic 4, H413 |

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

* The contained mineral oil can be described by one or more of the following numbers:

| EINECS, ELINCS, NLP | Registration number (REACH) | Chemical name |
|---------------------|-----------------------------|---|
| 265-157-1 | 01-2119484627-25-XXXX | Distillates (petroleum), hydrotreated heavy paraffinic |
| 265-169-7 | 01-2119471299-27-XXXX | Distillates (petroleum), solvent-dewaxed heavy paraffinic |
| 265-158-7 | 01-2119487077-29-XXXX | Distillates (petroleum), hydrotreated light paraffinic |
| 265-159-2 | 01-2119480132-48-XXXX | Distillates (petroleum), solvent-dewaxed light paraffinic |

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

For substances that are listed in appendix VI, table 3.1/3.2 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.

SECTION 4: First aid measures

4.1 Description of first aid measures

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Inhalation

Remove person from danger area.
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.
Do not induce vomiting. Consult doctor immediately.
Danger of aspiration

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.

The following may occur:

Irritation of the eyes
Irritation of the skin.
Drying of the skin.
Dermatitis (skin inflammation)

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

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO2
Foam
Dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Irritating vapours
Oxides of carbon
Oxides of nitrogen
Oxides of sulphur
Oxides of phosphorus
Flammable vapour/air mixtures

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
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

Ensure sufficient supply of air.
Avoid formation of oil mist.
Avoid inhalation, and contact with eyes or skin.
Do not carry cleaning cloths soaked in product in trouser pockets.
If applicable, caution - risk of slipping.

6.2 Environmental precautions

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If leakage occurs, dam up.
 Resolve leaks if this possible without risk.
 Prevent from entering drainage system.
 Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent) 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.
 Keep away from sources of ignition - Do not smoke.
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
 Do not heat to temperatures close to flash point.
 Take measures against electrostatic charging, if appropriate.
 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

Not to be stored in gangways or stair wells.
 Store product closed and only in original packing.
 Protect against moisture and store closed.
 Store cool.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Chemical Name | Oil mist, mineral | Content %: |
|--------------------------|--|------------|
| WEL-TWA: 5 mg/m3 (ACGIH) | WEL-STEL: 10 mg/m3 (ACGIH) | --- |
| Monitoring procedures: | - Draeger - Oil 10/a-P (67 28 371) - Draeger - Oil Mist 1/a (67 33 031) | |
| BMGV: --- | Other information: --- | |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

| Bis(nonylphenyl)amine | | | | | | |
|-----------------------|--|-----------------------------|------------|-------|--------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 0,62 | mg/kg bw/day | |

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| | | | | | | |
|---------------------|--|-----------------------------|------|--------|-------------------|--|
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 4,37 | mg/m ³ | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 0,31 | mg/kg bw/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 1,09 | mg/m ³ | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 0,31 | mg/kg bw/day | |
| | Environment - freshwater | | PNEC | 0,1 | mg/l | |
| | Environment - marine | | PNEC | 0,01 | mg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 1 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 1 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 132000 | mg/kg dry weight | |
| | Environment - sediment, marine | | PNEC | 13200 | mg/kg dry weight | |
| | Environment - soil | | DNEL | 263000 | mg/kg dw | |

| Distillates (petroleum), hydrotreated heavy paraffinic | | | | | | |
|--|--|--------------------------|------------|-------|-------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 5,4 | mg/m ³ | |
| Consumer | Human - inhalation | Long term, local effects | DNEL | 1,2 | mg/m ³ | |
| | Environment - oral (animal feed) | | PNEC | 9,33 | mg/kg feed | |

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.

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:
 Tight fitting protective goggles (EN 166) with side protection, with danger of projections.

Skin protection - Hand protection:
 Protective nitrile gloves (EN 374)
 Permeation time (penetration time) in minutes:
 >480
 Minimum layer thickness in mm:
 0,4
 Protective hand cream recommended.
 The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.
 The recommended maximum wearing time is 50% of breakthrough time.

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

Respiratory protection:
 Normally not necessary.
 With oil mist formation:
 Filter A P2 (EN 14387), code colour brown, white

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Observe wearing time limitations for respiratory protection equipment.

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: | Brown |
| Odour: | Characteristic |
| Odour threshold: | Not determined |
| pH-value: | n.a. |
| Melting point/freezing point: | Not determined |
| Initial boiling point and boiling range: | Not determined |
| Flash point: | 230-240 °C |
| Evaporation rate: | Not determined |
| Flammability (solid, gas): | Not determined |
| Lower explosive limit: | Not determined |
| Upper explosive limit: | Not determined |
| Vapour pressure: | Not determined |
| Vapour density (air = 1): | Not determined |
| Density: | 0,85-0,866 g/ml |
| Bulk density: | n.a. |
| Solubility(ies): | Not determined |
| Water solubility: | Insoluble |
| Partition coefficient (n-octanol/water): | Not determined |
| Auto-ignition temperature: | Not determined |
| Decomposition temperature: | Not determined |
| Viscosity: | 112-116 mm ² /s (40°C) |
| Viscosity: | 17,5-18,5 mm ² /s (100°C) |
| Explosive properties: | Not determined |
| Oxidising properties: | No |

9.2 Other information

| | |
|---------------------------|----------------|
| Miscibility: | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity: | Not determined |
| Surface tension: | Not determined |
| Solvents content: | Not determined |

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

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See also section 7.
 Open flame, ignition sources
 Protect from humidity.

10.5 Incompatible materials

See also section 7.
 Avoid contact with strong oxidizing agents.
 Avoid contact with strong acids.
 Avoid contact with other chemicals.

10.6 Hazardous decomposition products

See also section 5.2
 No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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. |
| Other information: | | | | | | Classification according to calculation procedure. |

Distillates (petroleum), hydrotreated heavy paraffinic

| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|------------------------------------|----------|-------|---------|----------|--------------------------------------|---|
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | | |
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | OECD 401 (Acute Oral Toxicity) | Analogous conclusion |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | Analogous conclusion |
| Acute toxicity, by dermal route: | LD50 | >5000 | mg/kg | Rabbit | | |
| Acute toxicity, by inhalation: | LC50 | >5,53 | mg/l/4h | Rat | OECD 403 (Acute Inhalation Toxicity) | Aerosol, Analogous conclusion |
| Skin corrosion/irritation: | | | | | | Not irritant |
| Skin corrosion/irritation: | | | | | | Mild irritant, Analogous conclusion |
| Skin corrosion/irritation: | | | | | | Not irritant |
| Serious eye damage/irritation: | | | | | | Not irritant |
| Respiratory or skin sensitisation: | | | | | | Not sensitizing |
| Aspiration hazard: | | | | | | Yes |
| Aspiration hazard: | | | | | | Yes, Analogous conclusion |
| Aspiration hazard: | | | | | | Yes |
| Symptoms: | | | | | | coughing, respiratory distress, nausea and vomiting., diarrhoea |

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|------------------------------------|----------|-------|-------|------------|--|----------------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | OECD 401 (Acute Oral Toxicity) | Analogous conclusion |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | Analogous conclusion |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Mild irritant |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Not irritant |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | Not sensitising |

SECTION 12: Ecological information

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

| Molygen 5W-50 4 L Art.: 2543 | | | | | | | |
|--|----------|------|-------|------|----------|-------------|---|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | | | | | | | n.d.a. |
| Toxicity to daphnia: | | | | | | | n.d.a. |
| Toxicity to algae: | | | | | | | n.d.a. |
| Persistence and degradability: | | | | | | | Mechanical precipitation possible. |
| Bioaccumulative potential: | | | | | | | n.d.a. |
| Mobility in soil: | | | | | | | n.d.a. |
| Results of PBT and vPvB assessment | | | | | | | n.d.a. |
| Other adverse effects: | | | | | | | n.d.a. |
| Other information: | | | | | | | According to the recipe, contains no AOX. |

| Distillates (petroleum), hydrotreated heavy paraffinic | | | | | | | |
|---|-----------|------|--------|------|---------------------------------|--|---------------------------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | NOEC/NOEL | 96h | >100 | mg/l | Pimephales promelas | OECD 203 (Fish, Acute Toxicity Test) | |
| Toxicity to daphnia: | LL50 | 96h | >10000 | mg/l | | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| Toxicity to algae: | NOEC/NOEL | 72h | >=100 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| Persistence and degradability: | | | | | | | Not readily biodegradable |
| Water solubility: | | | | | | | Insoluble |

| Bis(nonylphenyl)amine | | | | | | | |
|------------------------------|----------|------|-------|------|-------------------|--------------------------------------|-------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | LC50 | 96h | >100 | mg/l | Brachydanio rerio | OECD 203 (Fish, Acute Toxicity Test) | |

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| | | | | | | | |
|--------------------------------|---------|-----|-------|------|---------------------------------|---|---------------------------|
| Toxicity to daphnia: | LC50 | 48h | >100 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| Toxicity to algae: | EC50 | 72h | 600 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| Persistence and degradability: | | 28d | 1 | % | | OECD 301 B (Ready Biodegradability - Co2 Evolution Test) | Not readily biodegradable |
| Bioaccumulative potential: | Log Pow | | >7,6 | | | | |
| Toxicity to bacteria: | EC50 | 3h | >1000 | mg/l | activated sludge | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of.
 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)

07 06 99 wastes not otherwise specified

13 02 05 mineral-based non-chlorinated engine, gear and lubricating oils

20 01 26 oil and fat other than those mentioned in 20 01 25

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.

15 01 01 paper and cardboard packaging

15 01 02 plastic packaging

15 01 04 metallic packaging

SECTION 14: Transport information

General statements

UN number: n.a.

Transport by road/by rail (ADR/RID)

UN proper shipping name:

Transport hazard class(es): n.a.

Packing group: n.a.

Classification code: n.a.

LQ (ADR 2015): n.a.

Environmental hazards: Not applicable

Tunnel restriction code:

Transport by sea (IMDG-code)

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UN proper shipping name:
 Transport hazard class(es): n.a.
 Packing group: n.a.
 Marine Pollutant: n.a.
 Environmental hazards: Not applicable

Transport by air (IATA)

UN proper shipping name:
 Transport hazard class(es): n.a.
 Packing group: n.a.
 Environmental hazards: Not applicable

Special precautions for user

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

Transport in bulk according to Annex II of MARPOL and the IBC Code

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

For classification and labelling see Section 2.

Observe restrictions: n.a.
 General hygiene measures for the handling of chemicals are applicable.
 Directive 2010/75/EU (VOC): 0 %

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1 - 16

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

Not applicable

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H304 May be fatal if swallowed and enters airways.
 H413 May cause long lasting harmful effects to aquatic life.

Asp. Tox. — Aspiration hazard
 Aquatic Chronic — Hazardous to the aquatic environment - chronic

Any abbreviations and acronyms used in this document:

AC Article Categories
 acc., acc. to according, according to
 ACGIH American Conference of Governmental Industrial Hygienists
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOEL Acceptable Operator Exposure Level
 AOX Adsorbable organic halogen compounds
 approx. approximately
 Art., Art. no. Article number
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
 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
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

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BMGV Biological monitoring guidance value (EH40, UK)
 BOD Biochemical oxygen demand
 BSEF Bromine Science and Environmental Forum
 bw body weight
 CAS Chemical Abstracts Service
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
 CIPAC Collaborative International Pesticides Analytical Council
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 COD Chemical oxygen demand
 CTFA Cosmetic, Toiletry, and Fragrance Association
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 DOC Dissolved organic carbon
 DT50 Dwell Time - 50% reduction of start concentration
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 EEA European Economic Area
 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)
 ERC Environmental Release Categories
 ES Exposure scenario
 etc. et cetera
 EU European Union
 EWC European Waste Catalogue
 Fax. Fax number
 gen. general
 GHS Globally Harmonized System of Classification and Labelling of Chemicals
 GWP Global warming potential
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane
 HGWP Halocarbon Global Warming Potential
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC Intermediate Bulk Container
 IBC (Code) International Bulk Chemical (Code)
 IC Inhibitory concentration
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCLID International Uniform Chemical Information Database
 LC lethal concentration
 LC50 lethal concentration 50 percent kill
 LCLo lowest published lethal concentration
 LD Lethal Dose of a chemical
 LD50 Lethal Dose, 50% kill
 LDLo Lethal Dose Low
 LOAEL Lowest Observed Adverse Effect Level
 LOEC Lowest Observed Effect Concentration
 LOEL Lowest Observed Effect Level
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships
 n.a. not applicable
 n.av. not available
 n.c. not checked
 n.d.a. no data available
 NIOSH National Institute of Occupational Safety and Health (United States of America)
 NOAEC No Observed Adverse Effective Concentration

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NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

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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