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DFI Cleaner

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

1.1 Product identifier

DFI Cleaner

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

Additive

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

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:

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)

| Hazard class | Hazard category | Hazard statement |
|-----------------|-----------------|--|
| Acute Tox. | 4 | H302-Harmful if swallowed. |
| Skin Irrit. | 2 | H315-Causes skin irritation. |
| Eye Dam. | 1 | H318-Causes serious eye damage. |
| Asp. Tox. | 1 | H304-May be fatal if swallowed and enters airways. |
| STOT SE | 3 | H336-May cause drowsiness or dizziness. |
| Aquatic Acute | 1 | H400-Very toxic to aquatic life. |
| Aquatic Chronic | 1 | H410-Very toxic to aquatic life with long lasting effects. |
| | | |

2.2 Label elements

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



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Danger

H302-Harmful if swallowed. H315-Causes skin irritation. H318-Causes serious eye damage. H304-May be fatal if swallowed and enters airways. H336-May cause drowsiness or dizziness. H410-Very toxic 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. P273-Avoid release to the environment. P280-Wear protective gloves / eye protection / face protection.

P301+P310-IF SWALLOWED: Immediately call a POISON CENTER / doctor. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P331-Do NOT induce vomiting. P332+P313-If skin irritation occurs: Get medical advice / attention.

P405-Store locked up.

P501-Dispose of contents / container to an approved waste disposal facility.

Poly[oxy(1,2-propanediyl)], .alpha.-propyl-.omega.-hydroxy-, C12-15 alkyl ethers

Distillates (petroleum), hydrotreated light

Hydrocarbons, C10, aromatics, >1% naphthalene

Poly[oxy(1,2-propanediyl)], .alpha.-(3-aminopropyl)-.omega.-hydroxy-, C12-15 alkyl ethers

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 %).

Dangerous vapours heavier than air.

In case of spreading near the ground, flashback to distance sources of ignition is possible.

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a. **3.2 Mixtures**

| Distillates (petroleum), hydrotreated light | |
|--|-------------------------|
| Registration number (REACH) | 01-2119484819-18-XXXX |
| Index | 649-422-00-2 |
| EINECS, ELINCS, NLP, REACH-IT List-No. | 265-149-8 |
| CAS | 64742-47-8 |
| content % | 40-50 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Asp. Tox. 1, H304 |
| | Skin Irrit. 2, H315 |
| | STOT SE 3, H336 |
| | Aguatic Chronic 2, H411 |

| Poly[oxy(1,2-propanediyl)], .alpha(3-aminopropyl)omegahydroxy-, C12-15 alkyl ethers | |
|---|--|
| Registration number (REACH) | |
| Index | |
| EINECS, ELINCS, NLP, REACH-IT List-No. | |



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| CAS | |
|--|-------------------------------|
| content % | 32,88-36,18 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Acute Tox. 4, H302 |
| | Skin Irrit. 2, H315 |
| | Eye Dam. 1, H318 |
| | Aquatic Acute 1, H400 (M=1) |
| | Aquatic Chronic 1, H410 (M=1) |

| Phenol, (dimethylamino)methyl-, polyisobutylene derivatives | |
|--|-------------------------|
| Registration number (REACH) | |
| Index | |
| EINECS, ELINCS, NLP, REACH-IT List-No. | |
| CAS | |
| content % | 5-10 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Aquatic Chronic 3, H412 |

| Poly[oxy(1,2-propanediyl)], .alphapropylomegahydroxy-, C12-15 alkyl ethers | |
|--|---------------------|
| Registration number (REACH) | |
| Index | |
| EINECS, ELINCS, NLP, REACH-IT List-No. | |
| CAS | |
| content % | 1-<3 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Skin Irrit. 2, H315 |
| | Eve Dam. 1. H318 |

| Hydrocarbons, C10, aromatics, >1% naphthalene | |
|--|-------------------------|
| Registration number (REACH) | 01-2119463588-24-XXXX |
| Index | |
| EINECS, ELINCS, NLP, REACH-IT List-No. | 919-284-0 |
| CAS | (64742-94-5) |
| content % | 1-<2,5 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Asp. Tox. 1, H304 |
| | STOT SE 3, H336 |
| | Aquatic Chronic 2, H411 |

| Naphthalene | Substance for which an EU exposure limit value applies. |
|--|---|
| Registration number (REACH) | |
| Index | 601-052-00-2 |
| EINECS, ELINCS, NLP, REACH-IT List-No. | 202-049-5 |
| CAS | 91-20-3 |
| content % | 0,1-<0,25 |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Flam. Sol. 2, H228 |
| | Acute Tox. 4, H302 |
| | Carc. 2, H351 |
| | 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.

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

Remove person from danger area.

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

Skin contact



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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 - call doctor immediately, have Data Sheet available.

Protect uninjured eye.

Follow-up examination by an ophthalmologist.

Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting. Consult doctor immediately.

Danger of aspiration.

In case of vomiting, keep head low so that the stomach content does not reach the lungs.

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.

eyes, reddened

watering eyes

Drying of the skin.

Dermatitis (skin inflammation)

Ingestion:

Nausea

Vomiting

Danger of aspiration.

Oedema of the lungs

Chemical pneumonitis (condition similar to pneumonia)

Repeated exposure may cause skin dryness or cracking.

Dermatitis (skin inflammation)

Irritation of the respiratory tract

4.3 Indication of any immediate medical attention and special treatment needed

Gastric lavage (stomach washing) only under endotracheal intubation.

Subsequent observation for pneumonia and pulmonary oedema.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/foam/CO2/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:

Oxides of carbon

Danger of bursting (explosion) when heated

Explosive vapour/air or gas/air mixtures.

Oxides of carbon

Aldehydes

Ammonia

Nitro gases

Amines

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.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



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Keep unprotected persons away.

Ensure sufficient supply of air.

Remove possible causes of ignition - do not smoke.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

6.2 Environmental precautions

Resolve leaks if this possible without risk.

If leakage occurs, dam up.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent from entering drainage system.

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. Fill the absorbed material into lockable containers.

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.

Do not breathe vapour/spray.

Keep away from sources of ignition - Do not smoke.

Avoid contact with eyes or skin.

Do not carry cleaning cloths soaked in product in trouser pockets.

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.

Do not use on hot surfaces.

Use as far as possible in closed circuit plants/systems.

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.

Under all circumstances prevent penetration into the soil.

Store in a well ventilated place.

Store cool.

Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40): 800 mg/m3

| Chemical Name Distillates (petroleum), hydrotreated light | | Content %:40-50 | |
|---|--|-----------------|--|
| WEL-TWA: 800 mg/m3 | WEL-STEL: | | |
| Monitoring procedures: | - Draeger - Hydrocarbons 0,1%/c (81 03 571) | | |
| | Draeger - Hydrocarbons 2/a (81 03 581) | | |
| | | | |



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|---|------------------|---|---|---|-------------------------|
| | - | Compur - KITA-187 S (551 174) | | | |
| BMGV: | | | Other information: (C paragraphs 84-87, EH- | | o RCP-method, |
| Chemical Name | Hydrocarbons, C | 10, aromatics, >1% naphthalene | | | Content %:1-<2,5 |
| WEL-TWA: 500 mg/m3 (Aromatics | s) | WEL-STEL: | | | |
| Monitoring procedures: | - | Draeger - Hydrocarbons 0,1%/c (81 | 03 571) | | |
| | = | Draeger - Hydrocarbons 2/a (81 03 | 581) | | |
| BMGV: | | | Other information: | • | |
| ©B Chemical Name | Naphthalene | | | | Content %:0,1- <0,25 |
| WEL-TWA: 500 mg/m3 (Aromatics (50 mg/m3) (EU) | s) (WEL), 10 ppm | WEL-STEL: | | | |
| Monitoring procedures: | - - - | Compur - KITA-153 U(C) (551 182) NIOSH 5506 (POLYNUCLEAR ARC NIOSH 5515 (POLYNUCLEAR ARC OSHA 35 (Napthalene) - 1982 | | , | , |
| BMGV: | | | Other information: | - | |

| Hydrocarbons, C10, aron | Hydrocarbons, C10, aromatics, >1% naphthalene | | | | | |
|-------------------------|---|-----------------------------|------------|-------|------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 7,5 | mg/kg bw/d | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 32 | mg/m3 | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 7,5 | mg/kg bw/d | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 151 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 12,5 | mg/kg bw/d | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 151 | mg/m3 | |

| Naphthalene | | | | | | |
|---------------------|--|-----------------------------|------------|--------|-----------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - freshwater | | PNEC | 0,0024 | mg/l | |
| | Environment - marine | | PNEC | 0,0024 | mg/l | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 25 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 3,57 | mg/kg bw/day | |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW =

- "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
 (8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (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 (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
- (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/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. 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.
- (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

8.2 Exposure controls



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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:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

Recommended

Protective Neoprene® / polychloroprene gloves (EN 374).

Protective nitrile gloves (EN 374).

Minimum layer thickness in mm:

0,35

Permeation time (penetration time) in minutes:

240 - >480

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:

Ensure sufficient ventilation.

If OES or MEL is exceeded.

Filter A P2 (EN 14387), code colour brown, white

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: Light yellow, Transparent



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Odour: Not determined
Odour threshold: Not determined
pH-value: Not determined
Melting point/freezing point: Not determined

Initial boiling point and boiling range:

Not determined

Flash point: 74 °C (Pensky-Martens, closed cup)

Evaporation rate: Not determined

Flammability (solid, gas):

Lower explosive limit:

Upper explosive limit:

Vapour pressure:

Vapour density (air = 1):

Density:

Not determined

Not determined

Not determined

Not determined

Not determined

O,886 g/ml (15°C)

Bulk density: n.a.

Solubility(ies):

Water solubility:

Partition coefficient (n-octanol/water):

Auto-ignition temperature:

Decomposition temperature:

Viscosity:

Explosive properties:

Not determined

Not determined

Not determined

Not determined

Not determined

Oxidising properties:

9.2 Other information

Miscibility:

Not determined
Fat solubility / solvent:

Conductivity:

Not determined
Not determined
Surface tension:

Not determined
Solvents content:

Not determined

SECTION 10: Stability and reactivity

Not determined

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

Heating, open flame, ignition sources

10.5 Incompatible materials

Avoid contact with strong alkalis.

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

10.6 Hazardous decomposition products

See also section 5.2

Ammonia

Amines

Glycol

Alcohols

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

| DFI Cleaner | DFI Cleaner | | | | | | | | | | | |
|----------------------------------|-------------|-------|------|----------|-------------|--------|--|--|--|--|--|--|
| 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. | | | | | | |



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| Serious eye damage/irritation: | | n.d.a. |
|----------------------------------|--|--------|
| Respiratory or skin | | n.d.a. |
| sensitisation: | | |
| Germ cell mutagenicity: | | n.d.a. |
| Carcinogenicity: | | n.d.a. |
| Reproductive toxicity: | | n.d.a. |
| Specific target organ toxicity - | | n.d.a. |
| single exposure (STOT-SE): | | |
| Specific target organ toxicity - | | n.d.a. |
| repeated exposure (STOT-RE): | | |
| Aspiration hazard: | | n.d.a. |
| Symptoms: | | n.d.a. |

| Distillates (petroleum), hydrotr | eated light | | | | | |
|----------------------------------|-------------|-------|---------|----------|-------------|-------------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | | |
| Acute toxicity, by inhalation: | LD50 | >5 | mg/l/4h | Rat | | |
| Skin corrosion/irritation: | | | | | | Irritant |
| Serious eye damage/irritation: | | | | | | Mild irritant |
| Respiratory or skin | | | | | | No (skin contact) |
| sensitisation: | | | | | | |
| Aspiration hazard: | | | | | | Yes |

| Hydrocarbons, C10, aromatics, >1% naphthalene | | | | | | | | | | | |
|---|----------|-------|-------|----------|-------------|---------|--|--|--|--|--|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes | | | | | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | | | | | | | |
| Acute toxicity, by inhalation: | LC50 | >590 | mg/m3 | Rat | | Vapours | | | | | |
| Aspiration hazard: | | | | | | Yes | | | | | |

| Naphthalene | | | | | | |
|----------------------------------|----------|---------|---------|-------------|------------------------|-------------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | 533-710 | mg/kg | Mouse | OECD 401 (Acute Oral | |
| | | | | | Toxicity) | |
| Acute toxicity, by dermal route: | LD50 | >16000 | mg/kg | Rat | OECD 402 (Acute | |
| | | | | | Dermal Toxicity) | |
| Acute toxicity, by inhalation: | LC50 | >44 | mg/l/4h | Rat | OECD 403 (Acute | Maximum |
| | | | | | Inhalation Toxicity) | achievable |
| | | | | | | concentration. |
| Skin corrosion/irritation: | | | | Rabbit | | Not irritant |
| Serious eye damage/irritation: | | | | Rabbit | (Draize-Test) | Not irritant |
| Respiratory or skin | | | | Guinea pig | OECD 406 (Skin | No (skin contact) |
| sensitisation: | | | | | Sensitisation) | |
| Germ cell mutagenicity: | | | | Salmonella | OECD 471 (Bacterial | Negative |
| | | | | typhimurium | Reverse Mutation Test) | |
| Germ cell mutagenicity: | | | | Mammalian | OECD 479 (Genetic | Negative |
| | | | | | Toxicology - In Vitro | |
| | | | | | Sister Chromatid | |
| | | | | | Exchange assay in | |
| | | | | | Mammalian Cells) | |
| Reproductive toxicity | | | | Rat | OECD 414 (Prenatal | Negative |
| (Developmental toxicity): | | | | | Developmental Toxicity | |
| | | | | | Study) | |

SECTION 12: Ecological information

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

| DFI Cleaner | | | | | | | | | | | |
|----------------------------|----------|------|-------|------|----------|-------------|--------|--|--|--|--|
| 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. | | | | |



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| 12.2. Persistence and | | | | n.d.a. |
|-------------------------|--|--|--|--------|
| degradability: | | | | |
| 12.3. Bioaccumulative | | | | n.d.a. |
| potential: | | | | |
| 12.4. Mobility in soil: | | | | n.d.a. |
| 12.5. Results of PBT | | | | n.d.a. |
| and vPvB assessment | | | | |
| 12.6. Other adverse | | | | n.d.a. |
| effects: | | | | |

| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
|--------------------------------------|-----------|------|-------|------|----------------------------------|--|----------------------|
| 12.1. Toxicity to daphnia: | EC50 | 48h | 1,4 | mg/l | Daphnia magna | | |
| 12.1. Toxicity to fish: | NOEC/NOEL | 28d | 0,098 | mg/l | Oncorhynchus mykiss | | |
| 12.1. Toxicity to algae: | EL50 | 72h | 3 | mg/l | Pseudokirchneriell a subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.2. Persistence and degradability: | | 28d | 58,6 | % | | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Analogous conclusion |

| Phenol, (dimethylamino) | Phenol, (dimethylamino)methyl-, polyisobutylene derivatives | | | | | | | | | | | |
|----------------------------|---|------|-------|------|--------------------|-------------|----------|--|--|--|--|--|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes | | | | | |
| 12.1. Toxicity to fish: | LC50 | 96h | 31 | mg/l | Pimephales | | | | | | | |
| | | | | | promelas | | | | | | | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | >100 | mg/l | Daphnia magna | | | | | | | |
| 12.1. Toxicity to algae: | EC50 | 96h | >450 | mg/l | Pseudokirchneriell | | | | | | | |
| | | | | | a subcapitata | | | | | | | |
| 12.2. Persistence and | DOC | 28d | 20,7 | % | activated sludge | | Inherent | | | | | |
| degradability: | | | | | | | | | | | | |
| Toxicity to bacteria: | EC50 | 3h | >1000 | mg/l | activated sludge | | | | | | | |

| Hydrocarbons, C10, aron | natics, >1% napl | hthalene | | | | | |
|--------------------------------------|------------------|----------|-------|------|----------------------------------|--|----------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.3. Bioaccumulative potential: | Log Pow | | 3,3 | | | | |
| 12.1. Toxicity to fish: | LC50 | 96h | 2-5 | mg/l | Pimephales promelas | | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 3-10 | mg/l | Daphnia magna | | |
| 12.1. Toxicity to algae: | EC50 | 72h | 1 - 3 | mg/l | Pseudokirchneriell a subcapitata | | |
| 12.2. Persistence and degradability: | | 28d | 58 | % | | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Inherent |
| 12.3. Bioaccumulative potential: | BCF | | <100 | | | | Low |

| Naphthalene | | | | | | | | | | | |
|----------------------------------|----------|------|----------|------|------------------------|--|-------|--|--|--|--|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes | | | | |
| 12.1. Toxicity to fish: | LC50 | 96h | 0,11 | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test) | | | | | |
| 12.1. Toxicity to fish: | LC50 | 27d | 0,12 | mg/l | Oncorhynchus mykiss | | | | | | |
| 12.3. Bioaccumulative potential: | BCF | | 36,5-168 | | | | Low | | | | |



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| 12.1. Toxicity to daphnia: | EC50 | 48h | 2,16 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
|--------------------------------------|-----------|------|------|------|----------------------------------|---|---------------------------|
| 12.1. Toxicity to daphnia: | NOEC/NOEL | >60d | 0,59 | mg/l | Daphnia pulex | | 125d |
| 12.1. Toxicity to algae: | EC50 | 96h | 2,96 | mg/l | Pseudokirchneriell a subcapitata | | |
| 12.2. Persistence and degradability: | | 28d | >74 | % | | OECD 301 C (Ready Biodegradability - Modified MITI Test (I)) | Readily biodegradable |
| 12.2. Persistence and degradability: | | 28d | 0-2 | % | activated sludge | OECD 302 C (Inherent Biodegradability - Modified MITI Test (II)) | Not readily biodegradable |
| 12.3. Bioaccumulative potential: | Log Pow | | 3,4 | | | OECD 107 (Partition Coefficient (n- octanol/water) - Shake Flask Method) | (25°C) |

SECTION 13: Disposal considerations

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. 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

9

Ш

M6

General statements

14.1. UN number: 3082

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (POLYETHER AMINE, DISTILLATES (PETROLEUM))

14.3. Transport hazard class(es):
14.4. Packing group:
Classification code:

LQ: 5 L
14.5. Environmental hazards: environmentally hazardous

Tunnel restriction code:

Transport by sea (IMDG-code)

14.2. UN proper shipping name:





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ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (POLYETHER AMINE, DISTILLATES (PETROLEUM))

14.3. Transport hazard class(es):914.4. Packing group:IIIEmS:F-A, S-FMarine Pollutant:Yes

14.5. Environmental hazards: environmentally hazardous

Transport by air (IATA)

14.2. UN proper shipping name:

Environmentally hazardous substance, liquid, n.o.s. (POLYETHER AMINE, DISTILLATES (PETROLEUM))

14.3. Transport hazard class(es):
9
14.4. Packing group:
III

14.5. Environmental hazards: environmentally hazardous

14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained. All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

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

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Comply with special provisions.

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 maternity protection (national implementation of the Directive 92/85/EEC)! Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered

according to storage, handling etc.):

| according to ctorago, nanding cto./. | | | |
|--------------------------------------|------------------|--------------------------------------|--------------------------------------|
| Hazard categories | Notes to Annex I | Qualifying quantity (tonnes) of | Qualifying quantity (tonnes) of |
| | | dangerous substances as | dangerous substances as |
| | | referred to in Article 3(10) for the | referred to in Article 3(10) for the |
| | | application of - Lower-tier | application of - Upper-tier |
| | | requirements | requirements |
| E1 | | 100 | 200 |

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

47.4 %

Directive 2010/75/EU (VOC):

Observe incident regulations.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 2, 11, 15, 16

Employee training in handling dangerous goods is required.

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):







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| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used |
|---|--|
| Acute Tox. 4, H302 | Classification based on toxicological analyses. |
| Skin Irrit. 2, H315 | Classification according to calculation procedure. |
| Eye Dam. 1, H318 | No classification based on test data. |
| Asp. Tox. 1, H304 | Classification according to calculation procedure. |
| STOT SE 3, H336 | Classification according to calculation procedure. |
| Aquatic Acute 1, H400 | Classification according to calculation procedure. |
| Aquatic Chronic 1, H410 | 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 (specified in Section 2 and 3).

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.

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.

H412 Harmful to aquatic life with long lasting effects.

H228 Flammable solid.

Acute Tox. — Acute toxicity - oral

Skin Irrit. — Skin irritation

Eye Dam. — Serious eye damage

Asp. Tox. — Aspiration hazard STOT SE — Specific target organ toxicity - single exposure - narcotic effects

Aquatic Acute — Hazardous to the aquatic environment - acute Aquatic Chronic — Hazardous to the aquatic environment - chronic

Flam, Sol. — Flammable solid

Carc. — Carcinogenicity

Any abbreviations and acronyms used in this document:

according, according to acc., acc. 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

Article number Art., Art. no.

ASTM ASTM International (American Society for Testing and Materials)

ATE

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)

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

carcinogenic, mutagenic, reproductive toxic CMR

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

ΕČ **European Community**

ECHA European Chemicals Agency



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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)

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

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

ncl. 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)

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicablen.av. not availablen.c. not checkedn.d.a. no data available

OECD Organisation for Economic Co-operation and Development

org. organic

PBT persistent, bioaccumulative and toxic

PE Polyethylene

PNEC Predicted No Effect Concentration

ppm parts per million PVC Polyvinylchloride

REACHRegistration, 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)

SVHC Substances of Very High Concern

Tel. Telephone

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

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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