

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 1 / 12

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

1.1. product identifiers

Article No. (manufacturer/supplier) 329
Trade name/designation Toluol

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

Relevant identified uses:

Coating material to protecting surfaces

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

Vismara Unternehmungen CH-5000 Aarau www.farbladen.ch

Department responsible for information:

laboratory Manager
E-mail (competent person)

1.4. Emergency telephone number

Emergency telephone number 145 (+41 (0)44 251 51 51)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

| | | |
|----------------------|---------------------------|--|
| Flam. Liq. 2 / H225 | Flammable liquids | Highly flammable liquid and vapour. |
| Skin Irrit. 2 / H315 | Skin corrosion/irritation | Causes skin irritation. |
| Repr. 2 / H361 | Reproductive toxicity | Suspected of damaging the unborn child. |
| STOT SE 3 / H336 | STOT-single exposure | May cause drowsiness or dizziness. |
| STOT RE 2 / H373 | STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |
| Asp. Tox. 1 / H304 | Aspiration hazard | May be fatal if swallowed and enters airways. |

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Danger

Hazard statements

| | |
|------|--|
| H225 | Highly flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H361 | Suspected of damaging the unborn child. |
| H336 | May cause drowsiness or dizziness. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H304 | May be fatal if swallowed and enters airways. |

Precautionary statements

| | |
|------|--|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P103 | Read carefully and follow all instructions. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P240 | Ground and bond container and receiving equipment. |
| P241 | Use explosion-proof electrical equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharges. |
| P260 | Do not breathe vapour. |
| P261 | Avoid breathing vapours. |
| P264 | Wash hands thoroughly after handling. |

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 2 / 12

| | |
|--------------------|--|
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves and eye/face protection. |
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P308 + P313 | IF exposed or concerned: Get medical advice/attention. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P331 | Do NOT induce vomiting. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. |
| P362 + P364 | Take off contaminated clothing and wash it before reuse. |
| P370 + P378 | In case of fire: Use extinguishing powder or sand to extinguish. |
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Keep locked up. |
| P501 | Dispose of contents/container to industrial incineration plant. |

Hazard components for labelling

Toluene

Supplemental hazard information

not applicable

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Description Solvents/Thinner

Classification according to Regulation (EC) No 1272/2008 [CLP]

| EC No. CAS No. Index No. | REACH No. Designation classification // Remark | weight-% |
|--|---|----------|
| 203-625-9 108-88-3 601-021-00-3 | 01-2119471310-51 Toluene Flam. Liq. 2 H225 / Repr. 2 H361 / Asp. Tox. 1 H304 / STOT RE 2 H373 / Skin Irrit. 2 H315 / STOT SE 3 H336 | 80 - 100 |
| 215-535-7 1330-20-7 601-022-00-9 | 01-2119488216-32 Xylene Acute Tox. 4 H312 / Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / STOT SE 3 H335 / STOT RE 2 H373 / Asp. Tox. 1 H304 / Flam. Liq. 3 H226 | 1 - 5 |
| 202-849-4 100-41-4 601-023-00-4 | 01-2119489370-35 ethylbenzene Flam. Liq. 2 H225 / Acute Tox. 4 H332 / STOT RE 2 H373 / Asp. Tox. 1 H304 | 1 - 5 |

Additional information

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 3 / 12

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3. Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media

strong water jet

5.2. Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Further information

Vapours are heavier than air. Vapours form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 4 / 12

hazards due to electrostatic charges (TRGS 727)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values:

Toluene

Index No. 601-021-00-3 / EC No. 203-625-9 / CAS No. 108-88-3

WEL, TWA: 191 mg/m³; 50 ppm

WEL, STEL: 384 mg/m³; 100 ppm

Remark: (may be absorbed through the skin)

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

WEL, TWA: 220 mg/m³; 50 ppm

WEL, STEL: 441 mg/m³; 100 ppm

Remark: (may be absorbed through the skin)

BMGV, TWA: 650 mmol/mol creatinine

Remark: methyl hippuric acid; urine; end of exposure or end of shift

ethylbenzene

Index No. 601-023-00-4 / EC No. 202-849-4 / CAS No. 100-41-4

WEL, TWA: 441 mg/m³; 100 ppm

WEL, STEL: 552 mg/m³; 125 ppm

Remark: (may be absorbed through the skin)

Additional information

TWA : Long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

DNEL:

Toluene

Index No. 601-021-00-3 / EC No. 203-625-9 / CAS No. 108-88-3

DNEL long-term dermal (systemic), Workers: 384 mg/kg bw/day

DNEL acute inhalative (local), Workers: 384 mg/m³

DNEL acute inhalative (systemic), Workers: 384 mg/m³

DNEL long-term inhalative (local), Workers: 192 mg/m³

DNEL long-term inhalative (systemic), Workers: 192 mg/m³

DNEL long-term oral (repeated), Consumer: 8,13 mg/kg bw/day

DNEL long-term dermal (systemic), Consumer: 226 mg/kg bw/day

DNEL acute inhalative (local), Consumer: 226 mg/m³

DNEL acute inhalative (systemic), Consumer: 226 mg/m³

DNEL long-term inhalative (local), Consumer: 56,5 mg/m³

DNEL long-term inhalative (systemic), Consumer: 56,5 mg/m³

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

DNEL long-term dermal (systemic), Workers: 212 mg/kg bw/day

DNEL acute inhalative (local), Workers: 442 mg/m³

DNEL acute inhalative (systemic), Workers: 442 mg/m³

DNEL long-term inhalative (local), Workers:

DNEL long-term inhalative (systemic), Workers: 221 mg/m³

DNEL long-term oral (repeated), Consumer: 12,5 mg/kg bw/day

DNEL long-term dermal (systemic), Consumer: 125 mg/kg bw/day

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 5 / 12

DNEL acute inhalative (local), Consumer: 260 mg/m³
DNEL acute inhalative (systemic), Consumer: 260 mg/m³
DNEL long-term inhalative (local), Consumer: 65,3 mg/m³
DNEL long-term inhalative (systemic), Consumer: 65,3 mg/m³

ethylbenzene

Index No. 601-023-00-4 / EC No. 202-849-4 / CAS No. 100-41-4
DNEL long-term dermal (systemic), Workers: 180 mg/kg bw/day
DNEL long-term inhalative (systemic), Workers: 77 mg/m³
DNEL long-term oral (repeated), Consumer: 1,6 mg/kg bw/day
DNEL long-term inhalative (systemic), Consumer: 15 mg/m³

PNEC:

Toluene

Index No. 601-021-00-3 / EC No. 203-625-9 / CAS No. 108-88-3
PNEC aquatic, freshwater: 0,68 mg/L
PNEC aquatic, marine water: 0,68 mg/L
PNEC sediment, freshwater: 16,39 mg/kg
PNEC sediment, marine water: 16,39 mg/kg
PNEC, soil: 2,89 mg/kg
PNEC sewage treatment plant (STP): 13,61 mg/L
PNEC Waters, sporadic release: 0,68 mg/L

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7
PNEC aquatic, freshwater: 0,327 mg/L
PNEC aquatic, marine water: 0,327 mg/L
PNEC sediment, freshwater: 12,46 mg/kg
PNEC sediment, marine water: 12,46 mg/kg
PNEC sewage treatment plant (STP): 6,58 mg/L
soil: 2,31 mg/kg

ethylbenzene

Index No. 601-023-00-4 / EC No. 202-849-4 / CAS No. 100-41-4
PNEC aquatic, freshwater: 0,1 mg/L
PNEC aquatic, marine water: 0,01 mg/L
PNEC sediment, freshwater: 13,7 mg/kg
PNEC sediment, marine water: 1,37 mg/kg
PNEC, soil: 2,68 mg/kg
PNEC sewage treatment plant (STP): 9,6 mg/L

8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Wear closely fitting protective glasses in case of splashes.

Body protection

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 6 / 12

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state: | Liquid |
| Colour: | refer to label |
| Odour: | characteristic |
| Odour threshold: | not applicable |
| Melting point/freezing point: | not applicable |
| Initial boiling point and boiling range: | 111 °C Source: Toluene |
| Flammability: | Highly flammable liquid and vapour. |
| Lower and upper explosion limit: | |
| Lower explosion limit: | 1.18 Vol-% |
| Upper explosion limit: | 8 Vol-% Source: Xylene |
| Flash point: | 4 °C Method: DIN 53213 |
| Auto-ignition temperature: | 430 °C Source: ethylbenzene |
| Decomposition temperature: | not applicable |
| pH at 20 °C: | not applicable |
| Cinematic viscosity (40°C): | < 20 mm²/s |
| Viscosity at 20 °C: | 10 s 4 mm Method: DIN 53211 |
| Solubility(ies): | |
| Water solubility at 20 °C: | insoluble |
| Partition coefficient: n-octanol/water: | see section 12 |
| Vapour pressure at 20 °C: | 29 mbar Source: Toluene |
| Density and/or relative density: | |
| Density at 20 °C: | 0.87 g/cm³ |
| Relative vapour density: | not applicable |
| particle characteristics: | not applicable |

9.2. Other information

| | |
|--------------------------|---------------------|
| Solid content: | 0 weight-% |
| solvent content: | |
| Organic solvents: | 100 weight-% |
| Water: | 0 weight-% |

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. Conditions to avoid

Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. Incompatible materials

not applicable

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 7 / 12

10.6. Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

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

Acute toxicity

Toluene

oral, LD50, Rat: 636 mg/kg

Neurotoxicology. Vol. 2, Pg. 567, 1981

dermal, LD50, Rat: 12200 mg/kg

American Industrial Hygiene Association Journal. Vol. 30, Pg. 470, 1969

inhalative (vapours), LC50, Rat: 28,1 mg/L (4 h)

Method: OECD 403

oral, LD50, Rat, male: 5580 mg/kg

Method: EU Test B.1

dermal, LD50, Rabbit, male: > 5000

Xylene

oral, LD50, Rat, male: 5,523 mg/kg

Method: EU Test B.1

inhalative (vapours), LC50, Rat, male: 6700 ppm (4 h)

ethylbenzene

oral, LD50, Rat: 3,5 mg/kg

dermal, LD50, Rabbit: 15,4 mg/kg

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

ethylbenzene

Skin, Rabbit (24 h)

Causes mild skin irritation.

eyes, Rabbit

Causes slight eye irritation

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Suspected of damaging the unborn child.

ethylbenzene

Germ cell mutagenicity; Evaluation negative

Hamster; Mouse; ovaries

Carcinogenicity; Evaluation Carc. Cat. 2

Method: Group II B (IARC): Possible carcinogenic to humans (ethylbenzene)

human

STOT-single exposure; STOT-repeated exposure

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

Xylene

Specific target organ toxicity (repeated exposure)

Liver and kidney damage; central nervous system

Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Liver and kidney damage; central nervous system; hearing organs

ethylbenzene

Repeated dose toxicity, Rat: 75 mg/kg

Method OECD 407

RTECS-no.;; DA0700000

Depression of central nervous system

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 8 / 12

movement disorders; headache; Vomiting

Aspiration hazard

May be fatal if swallowed and enters airways.

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

Overall assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]

Do not allow to enter into surface water or drains.

12.1. Toxicity

Toluene

Fish toxicity, LC50, *Oncorhynchus kisutch* (silver salmon): 5,5 mg/L (96 h)

Daphnia toxicity, EC50, *Daphnia pulex* (water flea): 3,78 mg/L (48 h)

Algae toxicity, EC50, *Chlamydomonas angulosa*: 134 mg/L (3 h)

Bacteria toxicity, EC50, *Nitrosomonas* sp: 84 mg/L (24 h)

Xylene

Fish toxicity, LC50, fish: 2,6 mg/L (96 h)

Method: OECD 203

Algae toxicity, ErC50, *Pseudokirchneriella subcapitata*: 4,6 mg/L (72 h)

Method: OECD 201

Algae toxicity, EC50, *Pseudokirchneriella subcapitata*: 4,6 mg/L (72 h)

Method: OECD 201

Fish toxicity, LC50, *Oncorhynchus mykiss* (Rainbow trout) (96 h)

Method: OECD 203

Daphnia toxicity, IC50, *Daphnia magna*: 1 mg/L (24 h)

Method: OECD 202

Algae toxicity, EC50, *Selenastrum capricornutum*: 2,2 mg/L (73 h)

Method: OECD 201

Daphnia toxicity, growth test (Eb-Cx) 10%“, *Daphnia magna*: 1,91 mg/L (21 d)

Method: OECD 211

Bacteria toxicity, NOEC, Activated sludge: 16 mg/L (28 t)

Method: OECD 301 F

ethylbenzene

Fish toxicity, LC50, *Oncorhynchus mykiss* (Rainbow trout): 4,2 mg/L (96 h)

Daphnia toxicity, EC50, *Daphnia magna* (Big water flea) 1,8 - 2,4 mg/L (48 h)

Algae toxicity, EC50, *Skeletonema costatum*: 4,9 mg/L (72 h)

Algae toxicity, EC50, *Pseudokirchneriella subcapitata*: 7,2 mg/L (48 h)

Shellfish Toxicity, LC50, *Mysidopsis bahia*: > 5,2 mg/L (48 h)

Toxicity of Microorganisms, EC50, microorganisms: 96 mg/L (24 h)

Long-term Ecotoxicity

Toluene

Fish toxicity, NOEC, *Oncorhynchus kisutch* (silver salmon): 1,39 mg/L (40 d)

Daphnia toxicity, NOEC, *Daphnia pulex* (water flea): 0,74 mg/L (7 d)

Fish toxicity, LOEC:, *Oncorhynchus kisutch* (silver salmon): 2,77 mg/L (40 d)

Xylene

Algae toxicity, ErC50, *Pseudokirchneriella subcapitata*: 4,36 mg/L (73 h)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 9 / 12

Method: OECD 201
Fish toxicity, NOEC, fish: > 1,3 mg/L (56 d)
Daphnia toxicity, NOEC, Daphnia pulex (water flea): 1,17 mg/L (7 d)
Method: US EPA 600/4-91-003
Daphnia toxicity, EL50, Daphnia magna: 2,9 mg/L (21 d)
Method: OECD 211
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 2,2 mg/L (73 h)
Method: OECD 201
Daphnia toxicity, LOEC:, Daphnia magna (Big water flea): 3,16 mg/L (21 d)
Method: OECD 211
Algae toxicity, growth test (Eb-Cx) 10%“, Pseudokirchneriella subcapitata: 0,72 mg/L (73 h)
Method: OECD 201

ethylbenzene

Daphnia toxicity, NOEC, Ceriodaphnia dubia (Wasserfloh): 0,96 mg/L (7 d)
Daphnia toxicity, LC50, Ceriodaphnia dubia (Wasserfloh): 3,6 mg/L (7 d)
Bacteria toxicity, EC50, Nitrosomonas sp: 96 mg/L (24 h)
Algae toxicity, NOEC, Pseudokirchneriella subcapitata: 3,4 mg/L (96 h)
Daphnia toxicity, LOEC:, Ceriodaphnia dubia (Wasserfloh): 1,7 mg/L (7 d)

12.2. Persistence and degradability

Toluene

Persistence and degradability: Evaluation Rapid photochemical oxidation in air
Biodegradation: 86 percent (20 d)
Readily biodegradable (according to OECD criteria)

Xylene

Persistence and degradability:
Method: Rapid photochemical oxidation in air
Biodegradation: 98 percent (28 d)
Readily biodegradable (according to OECD criteria)

ethylbenzene

Biodegradation, aerobic: 70 - 80 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria)

12.3. Bioaccumulative potential

Toluene

Distribution coefficient n-octanol/water (log KOW): 2,65
Method: BCF: 90
The product has a low bioaccumulation potential

Xylene

Distribution coefficient n-octanol/water (log KOW): 3,49

ethylbenzene

Distribution coefficient n-octanol/water (log KOW): 3,6

Bioconcentration factor (BCF)

Toluene

Bioconcentration factor (BCF): 90 ; Evaluation The product has a low bioaccumulation potential

12.4. Mobility in soil

Toluene

Water: Evaluation Floats on the water
soil: Evaluation Mobile in the ground

Xylene

soil: Evaluation Absorbs slowly into the soil
Water: Evaluation Floats on the water

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 10 / 12

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Dispose of waste according to applicable legislation.

List of proposed waste codes/waste designations in accordance with EWC

140603* other solvents and solvent mixtures

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. UN number or ID number

UN 1993

14.2. UN proper shipping name

Land transport (ADR/RID):

Flammable liquid, n.o.s.
(TOLUOL)

Sea transport (IMDG):

FLAMMABLE LIQUID, N.O.S.
(TOLUOL)

Air transport (ICAO-TI / IATA-DGR):

Flammable liquid, n.o.s.
(TOLUOL)

14.3. Transport hazard class(es)

3

14.4. Packing group

II

14.5. Environmental hazards

Land transport (ADR/RID)

not applicable

Marine pollutant

not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

Tunnel restriction code

D/E

Sea transport (IMDG)

EmS-No.

F-E, S-E

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC-value (in g/L): 873

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
 Print date: 26.12.2022
 Version: 9.0

Toluol
 Revision date: 10.12.2022
 Issue date: 10.12.2022

EN
 Page 11 / 12

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

15.2. Chemical Safety Assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

| EC No. CAS No. | Designation | REACH No. |
|------------------------|--------------|------------------|
| 203-625-9 108-88-3 | Toluene | 01-2119471310-51 |
| 215-535-7 1330-20-7 | Xylene | 01-2119488216-32 |
| 202-849-4 100-41-4 | ethylbenzene | 01-2119489370-35 |

SECTION 16: Other information

Full text of classification in section 3

| | | |
|----------------------|-----------------------------------|--|
| Flam. Liq. 2 / H225 | Flammable liquids | Highly flammable liquid and vapour. |
| Repr. 2 / H361 | Reproductive toxicity | Suspected of damaging the unborn child. |
| Asp. Tox. 1 / H304 | Aspiration hazard | May be fatal if swallowed and enters airways. |
| STOT RE 2 / H373 | STOT-repeated exposure | May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard). |
| Skin Irrit. 2 / H315 | Skin corrosion/irritation | Causes skin irritation. |
| STOT SE 3 / H336 | STOT-single exposure | May cause drowsiness or dizziness. |
| Acute Tox. 4 / H312 | Acute toxicity (dermal) | Harmful in contact with skin. |
| Acute Tox. 4 / H332 | Acute toxicity (inhalative) | Harmful if inhaled. |
| Eye Irrit. 2 / H319 | Serious eye damage/eye irritation | Causes serious eye irritation. |
| STOT SE 3 / H335 | STOT-single exposure | May cause respiratory irritation. |
| Flam. Liq. 3 / H226 | Flammable liquids | Flammable liquid and vapour. |

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

| | | |
|---------------|---------------------------|------------------------|
| Flam. Liq. 2 | Flammable liquids | On basis of test data. |
| Skin Irrit. 2 | Skin corrosion/irritation | Calculation method. |
| Repr. 2 | Reproductive toxicity | Calculation method. |
| STOT SE 3 | STOT-single exposure | Calculation method. |
| STOT RE 2 | STOT-repeated exposure | Calculation method. |
| Asp. Tox. 1 | Aspiration hazard | Calculation method. |

Abbreviations and acronyms

| | |
|-----------|---|
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| OEL | Occupational Exposure Limit Value |
| BLV | Biological Limit Value |
| CAS | Chemical Abstracts Service |
| CLP | Classification, Labelling and Packaging |
| CMR | Carcinogenic, Mutagenic and Reprotoxic |
| DIN | German Institute for Standardization / German industrial standard |
| DNEL | Derived No-Effect Level |
| EAKV | European Waste Catalogue Directive |
| EC | Effective Concentration |
| EC | European Community |
| EN | European Standard |
| IATA-DGR | International Air Transport Association – Dangerous Goods Regulations |
| IBC Code | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| ICAO-TI | International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air |
| IMDG Code | International Maritime Code for Dangerous Goods |
| ISO | International Organization for Standardization |
| LC | Lethal Concentration |
| LD | Lethal Dose |
| MARPOL | Maritime Pollution: The International Convention for the Prevention of Pollution from Ships |

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 329
Print date: 26.12.2022
Version: 9.0

Toluol
Revision date: 10.12.2022
Issue date: 10.12.2022

EN
Page 12 / 12

| | |
|-------|--|
| OECD | Organisation for Economic Cooperation and Development |
| PBT | persistent, bioaccumulative, toxic |
| PNEC | Predicted No Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| UN | United Nations |
| VOC | Volatile Organic Compounds |
| vPvB | very persistent and very bioaccumulative |

Further information

Classification according to Regulation (EC) No 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.