

Toluene-d8

Classification acc. to 29 CFR 1910.1200

Revision: 2023-03-28 Version number: GHS 3.0 Replaces version of: 2023-02-02 (GHS 2)

SECTION 1: Identification

1.1 **Product identifier**

Identification of the substance Toluene-d8 CAS number 2037-26-5 Alternative name(s) toluene-d8

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

Relevant identified uses industrial uses

the product is intended for research, analysis and

scientific education

scientific research and development

product and process oriented research and devel-

opment

laboratory and analytical use

laboratory chemical

HS code 2845.90.

1.3 Details of the supplier of the safety data sheet

Zeochem AG Telephone: +41 44 922 93 93

e-Mail: info@zeochem.com / info@zeochem.ch Joweid 5, CH-8630 Rüti Switzerland

Website: https://www.zeochem.com

1.4 **Emergency telephone number**

| Pois | Λn | cer | nter |
|---------|----|-----|------|
| P () () | OH | cei | ner |

| Country | Name | Telephone | | |
|---------------|--------------------------------------|-------------------------------------|--|--|
| Switzerland | Toxzentrum Zürich / Tox. Info Suisse | +41 44 251 51 51 / CH: 145 - 24h/7d | | |
| United States | CHEMTREC USA | +1 800 424 9300 - 24h/7d | | |

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

| Section | Hazard class | Category | Hazard class and cat- egory | Hazard state- ment |
|---------|---|----------|--------------------------------|-----------------------|
| A.2 | skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |
| A.7 | reproductive toxicity | 2 | Repr. 2 H361d | |
| A.8D | specific target organ toxicity - single exposure (narcotic effects, drowsiness) | 3 | STOT SE 3 | H336 |
| A.9 | specific target organ toxicity - repeated exposure | 2 | STOT RE 2 | H373 |
| A.10 | aspiration hazard | 1 | Asp. Tox. 1 | H304 |



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| Section | Hazard class | Category | Hazard class and cat- egory | Hazard state- ment |
|---------|------------------|----------|--------------------------------|-----------------------|
| B.6 | flammable liquid | 2 | Flam. Liq. 2 | H225 |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

2.2.1.2 Pictograms

| GHS02, GHS07, GHS08 | |
|------------------------|--|
|------------------------|--|

| Hazard statements | | | | | | |
|-------------------|---|--|--|--|--|--|
| H225 | highly flammable liquid and vapor | | | | | |
| H304 | may be fatal if swallowed and enters airways | | | | | |
| H315 | causes skin irritation | | | | | |
| H336 | may cause drowsiness or dizziness | | | | | |
| H361d | suspected of damaging the unborn child | | | | | |
| H373 | may cause damage to organs through prolonged or repeated exposure | | | | | |

| | Precautionary statements |
|-----------|---|
| P201 | obtain special instructions before use |
| P210 | keep away from heat/sparks/open flames/hot surfaces. No smoking |
| P240 | ground/bond container and receiving equipment |
| P241 | use explosion-proof electrical/ventilating/lighting equipment |
| P242 | use only non-sparking tools |
| P243 | take precautionary measures against static discharge |
| P260 | do not breathe dust/fume/gas/mist/vapors/spray |
| P271 | use only outdoors or in a well-ventilated area |
| P280 | wear protective gloves/eye protection/face protection |
| P301+P310 | if swallowed: Immediately call a poison center/doctor |
| P302+P352 | if on skin: Wash with plenty of water |



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| Precautionary statements | | | | | | | |
|--------------------------|--|--|--|--|--|--|--|
| P303+P361+P353 | if on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower | | | | | | |
| P304+P340 | if inhaled: Remove person to fresh air and keep comfortable for breathing | | | | | | |
| P312 | call a poison center/doctor if you feel unwell | | | | | | |
| P321 | specific treatment (see on this label) | | | | | | |
| P331 | do NOT induce vomiting | | | | | | |
| P362 | take off contaminated clothing and wash it before reuse | | | | | | |
| P370+P378 | in case of fire: Use sand, carbon dioxide or powder extinguisher 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 | store locked up | | | | | | |
| P501 | dispose of contents/container in accordance with local/regional/national/international regulations | | | | | | |

2.3 Other hazards

Hazards not otherwise classified

May be harmful if inhaled (GHS category 5: acutely toxic - inhalation).

Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of \geq 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance Toluene-d8 Identifiers

CAS No 2037-26-5

Purity \geq 90 %

Molecular formula C7D8

Molar mass $100^{\text{ g}}/_{\text{mol}}$





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SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.





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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Store in a dry place.

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.





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7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- Specific designs for storage rooms or vessels
- Storage temperature

Recommended storage temperature: 15 - 20 °C 6 °C

- Packaging compatibilities
Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Cou | n- Name of agent | CAS No | Identi- fier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | | Ceiling-C [mg/m³] | | Source |
|-----|------------------|----------|-----------------|---------------|----------------|-----------------|-----------------|-----|----------------------|--|-------------------------|
| US | toluene | 108-88-3 | REL | 100 (10 h) | 375 (10 h) | 150 | 560 | | | | NIOSH REL |
| US | toluene | 108-88-3 | TLV® | 20 | | | | | | | ACGIH® 2022 |
| US | toluene | 108-88-3 | PEL | 200 | | 500 (10 min) | | 300 | | | 29 CFR 1910.10 00 |
| US | toluene (toluol) | 108-88-3 | PEL (CA) | 10 | 37 | 150 | 560 | 500 | | | Cal/ OSHA |

Notation

TWA

Ceiling-C ceiling value is a limit value above which exposure should not occur

Occupational exposure limit values (Workplace Exposure Limits)

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

od (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified



PEL



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| Country | Name of agent | Parameter | Notation | Identifier | Value | Source |
|---------|---------------|-----------|------------|------------|-----------|-------------|
| US | toluene | toluene | | BEI® | 0.03 mg/l | ACGIH® 2022 |
| US | toluene | toluene | | BEI® | 0.02 mg/l | ACGIH® 2022 |
| US | toluene | o-cresol | hydr, crea | BEI® | 0.3 mg/g | ACGIH® 2022 |

Notation

crea creatinine hydr hydrolysis

Human health values

Relevant DNELs and other threshold levels

| Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time | | |
|----------|----------------------|------------------------------------|-------------------|----------------------------|--|--|
| DNEL | 192 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects | | |
| DNEL | 384 mg/m³ | human, inhalatory | worker (industry) | acute - systemic effects | | |
| DNEL | 192 mg/m³ | human, inhalatory | worker (industry) | chronic - local effects | | |
| DNEL | 384 mg/m³ | human, inhalatory | worker (industry) | acute - local effects | | |
| DNEL | 384 mg/kg bw/ day | human, dermal | worker (industry) | chronic - systemic effects | | |

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Type of material

Nitrile

IIR: isobutene-isoprene (butyl) rubber

- Breakthrough times of the glove material

>30 minutes (permeation: level 2)



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- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| ··- | |
|----------------|-----------------------|
| Physical state | liquid |
| Color | colorless - clear |
| Particle | not relevant (liquid) |
| Odor | characteristic |

Other safety parameters

| pH (value) | not determined |
|---|----------------------------------|
| Melting point/freezing point | -84 – -95 °C at 1,013 hPa |
| Initial boiling point and boiling range | 111 °C at 1,013 hPa |
| Flash point | 4.4 °C at 1,013 hPa (closed cup) |
| Evaporation rate | not determined |
| Flammability (solid, gas) | not relevant, (fluid) |

Explosive limits

| - Lower explosion limit (LEL) | 1.1 vol% |
|-------------------------------|---|
| - Upper explosion limit (UEL) | 7.1 vol% |
| Vapor pressure | 0.448 PSI at 70 °F |
| Density | 0.94 ^g / _{cm³} at 20 °C |
| Vapor density | this information is not available |





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Solubility(ies)

| - Water solubility | 573 ^{mg} / _l at 25 °C |
|-----------------------|---|
| Partition coefficient | |

Partition coefficient

| - n-octanol/water (log KOW) | 2.73 (pH value: 7, 20 °C) (ECHA) |
|---------------------------------------|--|
| - Soil organic carbon/water (log KOC) | 2.31 (ECHA) |
| Auto-ignition temperature | 480 °C at 1,013 hPa (ECHA) (auto-ignition temperature (liquids and gases)) |

Viscosity

| - Dynamic viscosity | 0.56 mPa s at 25 °C |
|----------------------|---------------------|
| Explosive properties | none |
| Oxidizing properties | none |

9.2 Other information

| Surface tension | 27.7 ^{mN} / _m (25 °C) (ECHA) |
|--|--|
| Refractive index | 1.49 (20 °C) |
| Temperature class (USA, acc. to NEC 500) | T1 (maximum permissible surface temperature on the equipment: 450°C) |

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". It's a reactive substance. The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

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10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if inhaled.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

| Name of substance | CAS No | Classification | Number |
|-------------------|----------|----------------|--------|
| Toluene-d8 | 108-88-3 | 3 | |

Legend

Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

May be fatal if swallowed and enters airways.





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SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

| Δα | matic | toxicity | (acute) |
|----|-------|----------|---------|
| Αu | uatic | LUXICILY | (acute |

| Endpoint | Value | Species | Exposure time |
|----------|----------------------------------|----------------|---------------|
| LC50 | 5.5 ^{mg} / _l | fish | 96 h |
| EC50 | 84 ^{mg} / _l | microorganisms | 24 h |

Aquatic toxicity (chronic)

| Endpoint | Value | Species | Exposure time |
|----------|-----------------------------------|-----------------------|---------------|
| LC50 | 3.78 ^{mg} / _l | aquatic invertebrates | 2 d |
| EC50 | 3.23 ^{mg} / _l | aquatic invertebrates | 7 d |

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

| n-octanol/water (log KOW) | 2.73 (pH value: 7, 20 °C) (ЕСНА) |
|---------------------------|----------------------------------|
| BCF | 90 (ECHA) |

12.4 Mobility in soil

| Henry's law constant | 485 ^{Pa m³} / _{mol} |
|--|---------------------------------------|
| The Organic Carbon normalised adsorption coefficient | 2.31 (ECHA) |

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of \geq 0,1%.

12.7 Other adverse effects

Data are not available.





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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

| 14.1 | ı ı | IN | nu | mŀ | oer |
|------|-----|----|----|----|-----|
| | | | | | |

| DOT | UN 1294 |
|-----------|---------|
| IMDG-Code | UN 1294 |
| ICAO-TI | UN 1294 |

14.2 UN proper shipping name

| DOT | Toluene |
|-----------|---------|
| IMDG-Code | TOLUENE |
| ICAO-TI | Toluene |

14.3 Transport hazard class(es)

| DOT | 3 |
|-----------|---|
| IMDG-Code | 3 |
| ICAO-TI | 3 |

14.4 Packing group

| DOT | II |
|-----------|----|
| IMDG-Code | II |
| ICAO-TI | II |

14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.



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Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration UN1294, Toluene, 3, II

Reportable quantity (RQ) 1,000 lbs (454 kg) (Toluene-d8)

Danger label(s) 3



Special provisions (SP) IB2, T4, TP1

ERG No 130

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant Danger label(s) 3



Special provisions (SP) Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
EmS F-E, S-D
Stowage category B

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Danger label(s) 3



Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) substance is listed as "ACTIVE"

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

not listed



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- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings

Name of substance CAS No Remarks Effective date

Toluene-d8 108-88-3 1987-01-01

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

| Name of substance | CAS No | Remarks | Statutory code | Final RQ pounds (Kg) |
|-------------------|----------|---------|------------------|----------------------|
| Toluene-d8 | 108-88-3 | | 1 2 3 4 | 1000 (454) |

Legend

- "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act
- 2 "2" indicates that the source is section 307(a) of the Clean Water Act
 - "3" indicates that the source is section 112 of the Clean Air Act
- 4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

Clean Air Act

not listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

| Name of substance | CAS No | Functionality | Authoritative Lists |
|-------------------|----------|---------------|--|
| Toluene-d8 | 108-88-3 | | ATSDR Neurotoxicants CA MCLs CA TACs CDC 4th National Exposure Report CWA 303(c) CWA 303(d) IRIS Neurotoxicants OEHHA RELs Prop 65 |

- Toxic or Hazardous Substance List (MA-TURA)

| Name of substance | CAS No | DEP CODE | | De Minimis Concen- tration Threshold |
|-------------------|----------|----------|--|---|
| Toluene-d8 | 108-88-3 | | | 1.0 % |

- Hazardous Substances List (MN-ERTK)



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| CAS No | References | Remarks |
|--------|------------|---------|

Name of substance Toluene-d8 108-88-3 A, N, O skin

Legend

American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Stand-

ards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer

Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division 0

skin If a potential for absorption from skin contact merits special consideration, the word "skin" follows the substance name.

- Hazardous Substance List (NJ-RTK)

| Name of substance | CAS No | Remarks | Classifications |
|-------------------|----------|---------|-----------------|
| Toluene-d8 | 108-88-3 | | TE F3 |

Legend

Flammable - Third Degree

Teratogenic

- Hazardous Substance List (Chapter 323) (PA-RTK)

| Name acc. to inventory | CAS No | Classification |
|------------------------|----------|----------------|
| BENZENE, METHYL- | 108-88-3 | Е |

Legend

Environmental hazard

- Hazardous Substance List (RI-RTK)

| Name of substance | CAS No | References |
|-------------------|----------|------------|
| Toluene-d8 | 108-88-3 | T, F |

Legend

Flammability (NFPA®) Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and **Toxic Enforcement Act of 1987**

| Proposition 65 List of chemicals | | | |
|----------------------------------|----------|---------|----------------------|
| Name acc. to inventory | CAS No | Remarks | Type of the toxicity |
| toluene | 108-88-3 | | developmental |

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.





Toluene-d8

Revision: 2023-03-28

Classification acc. to 29 CFR 1910.1200

Version number: GHS 3.0 Replaces version of: 2023-02-02 (GHS 2)

| Category | Rating | Description |
|---------------------|--------|--|
| Chronic | * | chronic (long-term) health effects may result from repeated overexposure |
| Health | 2 | temporary or minor injury may occur |
| Flammability | 3 | material that can be ignited under almost all ambient temperature conditions |
| Physical hazard | 0 | material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive |
| Personal protection | - | |

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

| Category | Degree of hazard | Description |
|----------------|---------------------|--|
| Flammability | 3 | material that can be ignited under almost all ambient temperature conditions |
| Health | 2 | material that, under emergency conditions, can cause temporary incapacitation or residual injury |
| Instability | 0 | material that is normally stable, even under fire conditions |
| Special hazard | | |

National inventories

| Co | untry | Inventory | Status |
|----|-------|------------|---------------------|
| | EU | REACH Reg. | substance is listed |
| | US | TSCA | substance is listed |

Legend

REACH Reg. REACH registered substances TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-rel- evant |
|---------|------------------------------------|--|----------------------|
| 1.1 | CAS number: 2037-26-5, 108-88-3 | CAS number: 2037-26-5 | yes |
| 2.3 | | Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%. | yes |





Toluene-d8

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Version number: GHS 3.0 Replaces version of: 2023-02-02 (GHS 2)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-rel- evant |
|---------|--|--|----------------------|
| 3.1 | CAS No: 2037-26-5, 108-88-3 | CAS No: 2037-26-5 | yes |
| 7.2 | | - Specific designs for storage rooms or vessels | yes |
| 7.2 | | Storage temperature: Recommended storage temperature: 15 – 20 °C 6 °C | yes |
| 12.5 | Results of PBT and vPvB assessment: Data are not available. | Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. | yes |
| 12.6 | Endocrine disrupting properties: Not listed. | Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%. | yes |

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|-------|--|
| H225 | Highly flammable liquid and vapor. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

