



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

1.1 Product identifier

Trade name: TOLUENE D8 99.8 Atom% D

Article number: 7924

CAS Number:

2037-26-5

EC number:

218-009-5

Index number:

601-021-00-3

Registration number

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Application of the substance / the mixture

Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Carl Roth GmbH + Co. KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

E-Mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:

Poison Centre Munich

Telefon +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R48/20-63-65: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed.

Xi; Irritant

R38: Irritating to skin.

F; Highly flammable

R11: Highly flammable.

R67: Vapours may cause drowsiness and dizziness.

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Repr. Cat. 3

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms



Signal word Danger

Hazard statements

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H361d 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

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P331 Do NOT induce vomiting.

2.3 Other hazards

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation: Substances

CAS No. Description

2037-26-5 (2H8)toluene

Identification number(s)

EC number: 218-009-5

Index Number: 601-021-00-3

Formula: C₇D₈

Molar mass [g/mol]: 100,14

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SECTION 4: First aid measures**4.1 Description of first aid measures**

General information: Immediately remove any clothing soiled by the product.

After inhalation: Supply fresh air or oxygen; call for doctor.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

After massive or prolonged skin contact:

Seek medical treatment in case of complaints.

After eye contact:

Rinse opened eye for 10 minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth and drink a glass of water. Do not induce vomiting.

In case of spontaneous vomiting: Risk of aspiration. Pulmonary failure possible.

Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritations

Headache

Disziness

Disziness

Cramp

Nausea

Vomiting

CNS disorders

Hazards

Danger of pneumonia.

Danger of pulmonary oedema.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing agents:

Use fire extinguishing methods suitable to surrounding conditions.

CO₂, powder, foam or water spray.

For safety reasons unsuitable extinguishing agents:

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Can form explosive gas-air mixtures.

In the event of fire development of hazardous combustion gases or vapours possible.

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

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5.3 Advice for firefighters**Protective equipment:**

Wear self-contained respiratory protective device.

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Additional information Vapours heavier than air. Beware of reignition.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear personal protective equipment.

Do not inhale vapours. Avoid contact with the eyes and skin.

Keep away from ignition sources.

6.2 Environmental precautions

Do not allow product to reach sewage system or any water course.

Avoid penetration into drainage system because of danger of explosion.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. Rotisorb® Art.-Nr. 1710.1).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Work only in fume cupboard.

Keep receptacles tightly sealed.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:** Store away from foodstuffs.**Further information about storage conditions:**

Store receptacle in a well ventilated area.

Keep ignition sources away - Do not smoke.

Recommended storage temperature: 15 - 25 °C**SECTION 8: Exposure controls/personal protection****Additional information about design of technical facilities:** No further data; see item 7.

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8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:** Not required.**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Do not eat, drink or smoke while working.
Immediately remove all soiled and contaminated clothing.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Wash hands before breaks and at the end of work.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Respiratory protection:

Required when vapours/aerosols are generated.
Recommended filter typ: A
When selecting your respiratory unit: Consider the "Rules for the use of respiratory protection equipment" (BGR190).

Protection of hands:

Protective gloves
Check protective gloves prior to each use for their proper condition.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Viton, thickness: 0,7 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove materialValue for the permeation: Level ≥ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:

Viton, thickness: 0,7 mm

Value for the permeation: Level ≥ 6

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Eye protection:



Tightly sealed goggles

Body protection: Antistatic and flame-retardant clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	No information available.

pH-value: No information available.

Change in condition

Melting point/Melting range:	-85 °C
Boiling point/Boiling range:	109 °C

Flash point: 4 °C

Flammability (solid, gaseous): No information available

Ignition temperature: 535 °C

Decomposition temperature: No information available

Self-igniting: No information available

Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

Explosion limits:

Lower:	1.2 Vol %
Upper:	7 Vol %

Oxidizing properties: No information available.

Vapour pressure: No information available

Density at 20 °C:	0.94 g/cm ³
Relative density	No Information available.
Vapour density	No information available
Evaporation rate	No information available

Solubility in / Miscibility with water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): 2.65 log POW (exp. (IUCID))

Viscosity:

Dynamic:	No information available.
Kinematic:	No information available.

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9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity Fumes can combine with air to form an explosive mixture.

10.2 Chemical stability**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactionsDanger of explosion with:

Acetic acid
halogen-halogen compounds
fuming sulfuric acid
organic nitro compounds
Nitric acid
Silver

perchlorates
nitrogen dioxide
nonmetallic halides

Strong reaction possible with:

Strong oxidizing agents
Strong acids
Sulfur

10.4 Conditions to avoid Heat, flammes and sparks

10.5 Incompatible materials:

Gum
various plastics

10.6 Hazardous decomposition products: In case of fire: see item 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects**Acute toxicity:****LD/LC50 values relevant for classification:**

Oral	LD ₅₀	636 mg/kg (rat) (TOXNET)
Dermal	LD ₅₀	12200 mg/kg (rabbit) (GESTIS)
Inhalative	LC ₅₀ /4 h	49 mg/l (rat) (TOXNET)

Specific symptoms in biological assay: Skin and eye irritation test (rabbit): irritations.

Primary irritant effect:**on the skin:**

Slight irritations.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
Danger through skin adsorption.

on the eye: Irritating effect.

after inhalation:

Vapours may cause irritative symptoms.

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Absorption

Sensitisation: No sensitising effects known.**CMR effects:**

Repr. 2

Germ cell mutagenicity: No information available.**Carcinogenicity:** No information available.**Reproductive toxicity:** Suspected of damaging the unborn child.**Aspiration hazard:** May be fatal if swallowed and enters airways.**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.

Additional toxicological information:After swallowing:

Nausea

Vomiting

Diarrhoea

Pulmonary oedema

Systemic effects:

Headache

Dizziness

Dizziness

Spasms

Tiredness

CNS-disorders

cardiac arrhythmia

Damage of liver and kidneys.

respiratory paralysis

Death

Further information: The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information

12.1 Toxicity**Aquatic toxicity:****Fish toxicity:**LC₅₀ | 5.8 mg/l/96 h (Onchorhynchus mykiss) (ECOTOX Database)**Daphnia toxicity:**

EC50 | 6 mg/l/48 h (Daphnia magna) (ECOTOX Database)

Algal toxicity:

IC50 | 12 mg/l/72 h (Pseudokirchneriella subcapitata)

12.2 Persistence and degradability**Other information:**

Chemical Oxygen Demand; COD: 0.7 g/g

Biochemical Oxygen Demand, BOD₅: 0.86 g/g

Theoretical Oxygen Demand, ThOD: 3.13g/g

12.3 Bioaccumulative potential

Due to the distribution coefficient n-octanol/water a worth-mentioning accumulation in organisms is not expected.

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Ecotoxicological effects:

Remark: Do not allow product to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 13: Disposal considerations

Waste treatment methods**Recommendation**

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

Uncleaned packaging:

Recommendation: Disposal according to official regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA UN1294

14.2 UN proper shipping name

ADR 1294 TOLUENE
IMDG, IATA TOLUENE

14.3 Transport hazard class(es)

ADR, IMDG, IATA



Class 3 Flammable liquids.
Label 3

14.4 Packing group

ADR, IMDG, IATA II

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Warning: Flammable liquids.

Danger code (Kemler): 33

EMS Number: F-E,S-D

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

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Transport/Additional information:**ADR****Limited quantities (LQ)**

1L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

Transport category

2

Tunnel restriction code

D/E

IMDG**Limited quantities (LQ)**

1L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":

UN1294, TOLUENE, 3, II

SECTION 15: Regulatory information

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

National regulations:**Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Breakdown regulations:**Waterhazard class:**

Water hazard class 2 (Self-assessment): hazardous for water.

Other regulations, limitations and prohibitive regulations**Temperature class:** T1**15.2 Chemical safety assessment** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: Department: Health, Safety and Environment**Contact:** Herr Heine**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LD50*: Lethal Dose, 50 percent (Not relevant for classification)

LD50*: Lethal Concentration, 50 percent (Not relevant for classification)

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Safety data sheet
according to 1907/2006/EC, Article 31

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Revision: 27.03.2015

Trade name: TOLUENE D8 99.8 Atom% D

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Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

*** Data compared to the previous version altered.**

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