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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 31 May 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

2-Nitrotoluene

1.1. Catalog No.:

682199

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

· 2.1 Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008
Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
Repr. 2 H361f Suspected of damaging fertility.
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
Acute Tox. 4 H302 Harmful if swallowed.

2.2. Label elements

2.2.1. Pictogram

2.2.2.

· 2.2 Label elements
· Labelling according to Regulation (EC) No 1272/2008

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The substance is classified and labelled according to the CLP regulation.
· Signal word Danger
· Hazard statements
H302 Harmful if swallowed.
H340 May cause genetic defects.
H350 May cause cancer.
H361f Suspected of damaging fertility.
H411 Toxic to aquatic life with long lasting effects.
· Precautionary statements
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· Additional information:
Restricted to professional users.
· 2.3 Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

· 3.1 Chemical characterisation: Substances
· CAS No. Description
88-72-2 2-nitrotoluene
· Identification number(s) None
· EC number: 201-853-3
· Index number: 609-065-00-5
· RTECS: XT3150000
· Additional information: For the wording of the listed hazard phrases refer to section 16.

3.1.1. Formula

C7H7NO2

3.1.2. Molecular Weight (g/mol)

137.14

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3.1.3. CAS-No.

88-72-2

4. FIRST AID MEASURES

· 4.1 Description of first aid measures
· General information:
Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.
· After inhalation: Supply fresh air; consult doctor in case of complaints.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water.
· After swallowing:
Rinse mouth. Do not induce vomiting.
Seek medical treatment.
· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
· 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5. FIRE-FIGHTING MEASURES

· 5.1 Extinguishing media
· Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.
· 5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.
· 5.3 Advice for firefighters
· Protective equipment: Wear self-contained respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

· 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
· 6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· 6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of 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.

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7. HANDLING AND STORAGE

· 7.1 Precautions for safe handling
Ensure good ventilation/extraction at the workplace.
Store in cool, dry place in tightly closed receptacles.
Open and handle receptacle with care.
· Information about fire - and explosion protection: Keep respiratory protective device available.
· 7.2 Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles:
Store in a cool location.
Please refer to the manufacturers certificate for specific storage and transport temperature conditions.
Store only in the original receptacle.
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
· Information about storage in one common storage facility: Store away from foodstuffs.
· Further information about storage conditions: Keep container tightly sealed.
· 7.3 Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.
· 8.1 Control parameters
· Ingredients with limit values that require monitoring at the workplace: Not required.
· Additional information: Lists used were valid at the time of SDS preparation.
· 8.2 Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.

· Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· Eye protection:
Tightly sealed goggles

9. PHYSICAL AND CHEMICAL PROPERTIES

· 9.1 Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Liquid
Colour: Light yellow
· Odour: Aromatic
· Odour threshold: Not determined.
· pH-value: Not determined.
· Change in condition
Melting point/freezing point: -4.5 °C
Initial boiling point and boiling range: 222 °C
· Flash point: 106 °C
· Flammability (solid, gas): Not determined.

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· Ignition temperature: 420 °C
· Decomposition temperature: Not determined.
· Auto-ignition temperature: Not determined.
· Explosive properties: Not determined.
· Explosion limits:
Lower: 1.47 Vol %
Upper: 8.8 Vol %
· Vapour pressure at 20 °C: 0.16 hPa
· Density at 20 °C: 1.168 g/cm³
· Relative density Not determined.
· Vapour density Not determined.
· Evaporation rate Not determined.
· Solubility in / Miscibility with
water at 20 °C: 0.65 g/l
· Partition coefficient: n-octanol/water: 2.3 logP
· Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.
· 9.2 Other information No further relevant information available.

10. STABILITY AND REACTIVITY

· 10.1 Reactivity Stable under normal conditions.
· 10.2 Chemical stability Stable under normal conditions.
· Thermal decomposition / conditions to be avoided:
Formation of toxic gases is possible during heating or in case of fire.
· 10.3 Possibility of hazardous reactions No dangerous reactions known.
· 10.4 Conditions to avoid Heat.
· 10.5 Incompatible materials: Strong oxidizing agents.
· 10.6 Hazardous decomposition products:
Formation of toxic gases is possible during heating or in case of fire

11. TOXICOLOGICAL INFORMATION

· 11.1 Information on toxicological effects
· Acute toxicity
Harmful if swallowed.
· LD/LC50 values relevant for classification:
Oral LD50 891 mg/kg (rat)
· Primary irritant effect:
· Skin corrosion/irritation Based on available data, the classification criteria are not met.
· Serious eye damage/irritation Based on available data, the classification criteria are not met.
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Muta. 1B, Carc. 1B, Repr. 2
· Germ cell mutagenicity
May cause genetic defects.
· Carcinogenicity
May cause cancer.
· Reproductive toxicity
Suspected of damaging fertility.
· STOT-single exposure Based on available data, the classification criteria are not met.
· STOT-repeated exposure Based on available data, the classification criteria are not met.
· Aspiration hazard Based on available data, the classification criteria are not met.

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12. ECOLOGICAL INFORMATION

· 12.1 Toxicity
· Aquatic toxicity:
LC50/48 9.9 mg/l (crustacean)
EC50/48 h 8.85 mg/l (crustacean)
EC50/72h 22 mg/l (Algae)
LC50/96 h 37.1 mg/l (fish)
· 12.2 Persistence and degradability No further relevant information available.
· 12.3 Bioaccumulative potential No further relevant information available.
· 12.4 Mobility in soil No further relevant information available.
· Ecotoxicological effects:
· Remark: Toxic for fish
· Additional ecological information:
· General notes:
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
· 12.5 Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
· 12.6 Other adverse effects No further relevant information available.

13. DISPOSAL CONSIDERATIONS

· 13.1 Waste treatment methods
· Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
· European waste catalogue
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
· Uncleaned packaging:
· Recommendation: Dispose of in accordance with national regulations.

14. TRANSPORT INFORMATION

· 14.1 UN-Number
· ADR, IMDG, IATA UN1664
· ADR 1664 NITROTOLUENES, LIQUID, ENVIRONMENTALLY
HAZARDOUS
· IMDG NITROTOLUENES, LIQUID, MARINE POLLUTANT
· IATA NITROTOLUENES, LIQUID
· 14.3 Transport hazard class(es)
· ADR, IMDG
· Class 6.1 Toxic substances.
· Label 6.1
· IATA
· Class 6.1 Toxic substances.
· Label 6.1
· 14.4 Packing group
· ADR, IMDG, IATA II
· 14.5 Environmental hazards: Environmentally hazardous substance, liquid; Marine
Pollutant
· Marine pollutant: Symbol (fish and tree)
· Special marking (ADR): Symbol (fish and tree)
· 14.6 Special precautions for user Warning: Toxic substances.
· Danger code (Kemler): 60
· EMS Number: F-A,S-A
· Stowage Category A
· 14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code Not applicable.
· Transport/Additional information:
· ADR
· Limited quantities (LQ) 100 ml
· Transport category 2
· Tunnel restriction code D/E
· UN "Model Regulation": U N 1 6 6 4 N I T R O T O L U E N E S , L I Q U I D , 6 . 1 , I I , ENVIRONMENTALLY HAZARDOUS

15. REGULATORY INFORMATION

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Philippines Inventory of Chemicals and Chemical Substances Substance is listed.
· Australian Inventory of Chemical Substances Substance is listed.
· Standard for the Uniform Scheduling of Medicines and Poisons S7
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I Substance is not listed.
· Seveso category E2 Hazardous to the Aquatic Environment
· Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 28, 29
· National regulations:
· Additional classification according to Decree on Hazardous Materials, Annex II:
Carcinogenic hazardous material group I (extremely dangerous).
Carcinogenic hazardous material group II (very dangerous).
Carcinogenic hazardous material group III (dangerous).
· Information about limitation of use:
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!