

SAFETY DATA SHEET

Version: v1

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

1.1 Product identifiers

Product name : m-Toluidine
Product Number : T110548
Brand : aladdin
CAS-No. : 108-44-1

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

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 4), H227

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - repeated exposure (Category 2), H373

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word

Hazard statement(s)

H227

Combustible liquid

H373

Causes damage to organs through prolonged or repeated exposure

H400

Very toxic to aquatic life

H411

Toxic to aquatic life with long lasting effects

H301+H311+H331

Toxic if swallowed, in contact with skin or if inhaled

Precautionary statement(s)

P210

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

P260

Do not breathe dust/fume/gas/mist/vapors/spray.

P264

Wash hands [and ...] thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P273

Avoid release to the environment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P311

Call a POISON CENTER or doctor/...

P314

Get medical advice/attention if you feel unwell.

P330

Rinse mouth.

P391

Collect spillage.

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor/...

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P370+P378

In case of fire: Use ... to extinguish.

P405

Store locked up.

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P403+P235

Store in a well-ventilated place. Keep cool.

P501

Dispose of contents/container to an approved waste disposal plant.

P302+P352+P312

IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms

: 3-Methylaniline 3-Toluidine

Formula

: C₇H₉N

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Molecular weight	: 107.15
CAS No.	: 108-44-1
EC-NO.	: 203-583-1

Component	Classification	Concentration
m-Toluidine	Flammable liquids Category 4; Acute toxicity Category 3; Specific target organ toxicity - repeated exposure Category 2; Short-term (acute) aquatic hazard Category 1; Longterm (chronic) aquatic hazard Category 2; H227, H301, H331, H311, H373, H400, H411 M-Factor - Aquatic Acute: 10	99%

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

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

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

Suitable extinguishing media

Carbon dioxide (CO2) Foam Dry powder

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Light sensitive, Store away from light.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Component	CAS No.	Value	Control parameters	Basis
m-Toluidine	108-44-1	TWA	2 ppm	United States. ACGIH Threshold Limit (TLV)
	Note	Not classified as human carcinogen skin absorption hazard		
		TWA	2 ppm9 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		Skin symbol		
		PEL	2 ppm9 mg/m3	Allowable exposure limits for chemical pollutants in California (article 107, paragraph 8)
		Skin		

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

protective clothing

Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	form: Liquid color: Very Faint Yellow to Brown
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	203-204°C
g) Flash point	90°C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	0.989-0.992
n) Water solubility	Slightly soluble in water, soluble in alcohol, ether and dilute acid.
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion/exothermic reaction with: Nitric acid mineral acids

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

various plastics

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 922 mg/kg Remarks: (ECHA) Symptoms: Nausea, Vomiting Oral: (Regulation (EC) No 1272/2008, Annex VI) LC50 Inhalation - 4 h - 3 mg/l - vapor Remarks: (Regulation (EC) No 1272/2008, Annex VI) LD50 Dermal - 300 mg/kg Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 24 h Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit Result: No eye irritation Remarks: (ECHA)

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Chromosome aberration test in vitro Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative

Carcinogenicity

no data available

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Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure. Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

no data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 42 Days - LOAEL (Lowest observed adverse effect level) - 30 mg/kg RTECS: XU2800000 Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Systemic effects: After absorption: confusion Dizziness ataxia (impaired locomotor coordination) Headache CNS disorders Risk of methaemoglobin formation. impaired vision and hearing defect cardiovascular disorders Cardiac irregularities Coma Symptoms may be delayed. Danger of cumulative effects. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates static test LC50 - Daphnia magna (Water flea) - 0.73 mg/l - 48 h

Remarks: (ECHA) Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 53.11 mg/l - 72 h (OECD Test Guideline 201) Toxicity to bacteria static test EC50 - activated sludge - 1,572 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 64 - 84 % - Readily biodegradable. (OECD Test Guideline 301E)

12.3 Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 28 d - 0.1 mg/l(m-toluidine) Bioconcentration factor (BCF): < 1.3 (OECD Test Guideline 305C)

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

Discharge into the environment must be avoided.

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SECTION 13:

13.1 Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 1708

Packing group: II

Class: 6.1

Proper shipping name: TOLUIDINES,
LIQUID

Reportable Quantity(RQ): no data
available

Poison Inhalation Hazard: no data
available

Environmental Hazards: yes

IMDG

UN number: 1708

Packing group: II

EMS-No: no data available

Proper shipping name: TOLUIDINES, LIQUID

IATA

UN number: 1708

Packing group: II

Class: 6.1

Proper shipping name: TOLUIDINES, LIQUID

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

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Regulatory Affairs

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SDS sections updated v1

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