

Material Safety Data Sheet	m-Toluidine
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1 Product And Company Identification :

Product Name	: m-Toluidine
Other/Generic Names	: 3-Methylaniline 3-Aminophenylmethane 3-Aminotoluene Butanedioic anhydride Dihydro-2,5-furandione
CAS No.	: 108-44-1
Product use	: It is an intermediate for pigment, dyestuffs, photographic chemicals, antioxidants, agricultural, pharmaceutical and rubber chemicals.
Supplier	Deepak Nitrite Ltd. Aaditya-I, National Highway No. 8, Chhani Road, Vadodara - 390 024, India Manufacturing facilities at : Vadodara, Roha, Taloja & Hyderabad. Contact no. : +91-9904406400
For Chemical Emergency	Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887

2 Hazard Identification :

GHS classification (Classification according to Regulation (EC) No 1272/2008)	Hazard statement (s)
Health Hazards : 4 Flammability: 2 Physical hazards: 0	H227 Combustible liquid H302 Harmful if swallowed. H311 + H331 Toxic in contact with skin or if inhaled. H316 Causes mild skin irritation. H319 Causes serious eye irritation. H400 Very toxic to aquatic life.
EC classification (Classification according to Directive 67/548/EEC)	
T: R23/24/25 Xi; R36 Carc.Cat.3; R40 R43 N : R50 Acute aquatic toxicity,	Toxic by inhalation, in contact with skin and if swallowed Irritating to eyes. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact. Very toxic to aquatic organisms.
Hazard pictograms	



Signal word

Danger

3 Composition / Information On Ingredients :

Chemical formula	: C ₇ H ₉ N
Common Name	: m-Toluidine
Synonyms	: 3-Methylaniline 3-Aminophenylmethane 3-Aminotoluene Butanedioic anhydride Dihydro-2,5-furandione
Molecular weight	: 107.15 g/mol
CAS No.	: 108-44-1
Index No.	: 612-024-00-4
UN No.	: 1708
EINECS No.	: 203-583-1

4 First Aid Measures :

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5 Fire Fighting Measures:

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6 Accidental Release Measures :

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7 Handling & Storage :

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8 Exposure Control / Personal Protection :

Personal protective equipment :

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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.

Eye protection

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

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9 Physical And Chemical Properties :

Appearance	: Clear Liquid
Colour	: Light yellow
Odour	: Aromatic Amine
pH (1% Solution)	:
Boiling Point/range	: 203 - 204 °C (397 - 399 °F) - lit.
Melting point	: - 30 deg C (- 22.00°F)
Flash Point	: 86 °C (187 °F) - closed cup
Autoignition temperature	: 482 °C (900 °F)
Lower explosion limit	: 1.1 %(V)
Upper explosion limit	: 6.6 %(V)
Vapour Pressure	: 67 hPa (50 mmHg) at 68 °C (154 °F) 1 hPa (1 mmHg) at 41 °C (106 °F)
Density	: 0.999 g/cm ³ at 25 °C (77 °F)
Solubility water	: 2% w/w in water , Soluble in acetone, ethanol, dilute acids
Relative vapour density	: 4.29

10 Stability And Reactivity :

Chemical stability

Stable under recommended storage conditions.

Materials to avoid

Acid anhydrides, Chloroformates, Strong oxidizing agents

Conditions to avoid

Heat, flames and sparks.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

11 Toxicological Information :

Acute toxicity	: LD ₅₀ Oral - rat - 450 mg/kg Draize test, rabbit, skin: 500 mg/24H Mild; Oral, mouse: LD50 = 740 mg/kg; Oral, rabbit: LD50 = 750 mg/kg; Skin, rabbit: LD50 = 3250 mg/kg;
RTECS#	: XU2800000
Category of danger	: Combustible Liquid, Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Irritant, Carcinogen
Health Warnings	: Liver, Blood, Kidney, Bladder
Carcinogenicity	: m-Toluidine Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Target organs	: Liver, Kidney, blood, bladder
Potential health effects	: Inhalation May be fatal if inhaled. Causes respiratory tract irritation. Ingestion Toxic if swallowed. Skin May be harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

12 Ecological Information :

Acute fish toxicity LC ₅₀	: Daphnia magna (Water flea) - 0.73 mg/l - 48 h
Acute toxicity to aquatic invertebrates EC ₅₀	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life. WGK : CAS# 108-44-1: 2

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13 Disposal Considerations :

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Packaging

Contaminated packaging
Dispose of as unused product.

14 Transport Information :

UN No. : 1708

Hazard Class : 6.1

Packing Group : II

DOT (US)

UN-Number: 1708 Class: 6.1 Packing group: II

Proper shipping name: Toluidines, liquid

Marine pollutant: Yes

Poison Inhalation Hazard: No

IMDG

UN-Number: 1708 Class: 6.1 Packing group: II

Proper shipping name: TOLUIDINES, LIQUID

Marine pollutant: Yes

IATA

UN-Number: 1708 Class: 6.1 Packing group: II

Proper shipping name: Toluidines, liquid

15 Regulatory Information :

Safety Information according to GHS

Hazard Statement (s)

H227 Combustible liquid
H302 Harmful if swallowed.
H311 + H331 Toxic in contact with skin or if inhaled.

H316 Causes mild skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

Precautionary Statement (s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P311 Call a POISON CENTER or doctor/ physician.

Signal Word

Danger

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Hazard Pictogram(s):



RTECS# : XU3150000

Labeling according to EC directives

Hazard symbols :

Risk phrases

R 23/24/25

R 33

R 50

Toxic by inhalation, in contact with skin and if swallowed.

Danger of cumulative effects.

Very toxic to aquatic organisms.

Safety phrases

S 28A

S 36/37

S 45

S 61

After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing and gloves.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Avoid release to the environment. Refer to special instructions/safety data sheets.

OSHA Hazards

Combustible Liquid, Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Irritant, Carcinogen

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold

(De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

16 Other Information:

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