

**Safety Data Sheet****1. Identification**

Product name	Dimethyl-p-toluidine
Product code	DMpT
Manufacturer name	Mitsubishi Chemical Co. Ltd.
Address	14 Kitano-hara-cyo, Kamigamo, Kita-ku, Kyoto, 603-8006, Japan
Contact	Development and Technical Division
Telephone number	+81-781-1177
Emergency telephone number	+81-781-1177
Fax number	+81-701-7227
Applications and usage restrictions	Catalysts for polymerization, curing catalysts, plastic cement · adhesive agents

2. Hazard identification

GHS classification

Physical hazards

Flammable liquid	Category 4
------------------	------------

Health hazards

Acute toxicity (oral)	Category 4
-----------------------	------------

Acute toxicity (inhalation)	Category 4
-----------------------------	------------

Carcinogenicity	Category 2
-----------------	------------

Specific target organ toxicity (single exposure)	Category 1(blood), Category 3(narcotic effects)
--	---

Specific target organ toxicity (repeated exposure)	Category 1(respiratory organ , liver , kidney), Category 2(blood)
--	---

Environmental hazards

Acute aquatic hazards	Category 3
-----------------------	------------

Long term aquatic hazards	Category 3
---------------------------	------------

Label elements

Pictograms or hazards symbols	 
-------------------------------	---

Signal words	Danger
--------------	--------

Hazard statement	Combustible liquid. (H227) Harmful if swallowed. (H302) Harmful if inhaled. (H332)
------------------	--

May cause drowsiness or dizziness. (H336)
Suspected of causing cancer. (H351)
Causes damage to organs (blood system). (H370)
Causes damage to organs through prolonged or repeated exposure. (liver, kidney, and respiratory organs) (H372)
May cause damage to organs through prolonged or repeated exposure. (blood system) (H373)
Harmful to aquatic life with long-lasting effects. (H412)

Precautionary statements

Prevention

Obtain special instructions before use. (P201)
Do not handle until all safety precautions have been read and understood. (P202)
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. (P210)
Do not breathe dust/fume/gas/mist/vapors/spray. (P260)
Avoid breathing dust/fume/gas/mist/vapors/spray. (P261)
Wash hands thoroughly after handling. (P264)
Do not eat, drink or smoke when using this product. (P270)
Use only outdoors or in a well-ventilated area. (P271)
Avoid release to the environment. (P273)
Wear protective gloves/protective clothing/eye protection/face protection. (P280)

Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. (P301+P312)
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. (P304+P340)
IF exposed or concerned: Get medical advice/attention. (P308+P313)
Call a POISON CENTER or doctor/physician if you feel unwell. (P312)
Rinse mouth. (P330)
In case of fire: Use for extinction: CO₂, powder or water spray. (P370+P378)

Storage

Store in a well-ventilated place. Keep container tightly closed. (P403+P233)
Store locked up. (P405)

Disposal

Dispose of contents and container in accordance with local, regional, national regulations. (P501)

3. Composition/Information on Ingredients

Substance/mixture	Substance
Components	N,N-Dimethyl-p-toluidine
Synonyms	N,N,4-Trimethylaniline
Chemical Formula	C ₉ H ₁₃ N
CAS RN	99-97-8

4. First-aid Measures

If inhaled	Get medical advice/attention if you feel unwell. If the symptom continues, get medical advice.
If on skin	Wash with plenty of soap and water.
If in eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If swallowed	Rinse mouth. Get medical advice/attention.
Protection of first-aiders	Rescuers should wear protective equipment suitable for the situation.

5. Fire-fighting measures

Suitable extinguishing media	Water spray, dry chemical, foam, CO ₂
Unsuitable extinguishing media	Straight stream
Specific hazard arising	The possibility to decompose upon combustion or in high temperatures and to generate poisonous fume.
Specific fire extinguishing method	Fire-extinguishing work must be done from windward. Shut off sources of ignition. Cool surrounding containers with water spray. Prevent unrelated people from entering the area. Remove the container from the fire area, if not dangerous.
Special protective equipment for fire-fighting person	Protection with self-contained breathing apparatus.

6. Accidental release measure

Precautions for human-body and protective apparatus and emergency procedures	Prevent unrelated people from entering the area. Wear respiratory protection, eye protection, hand protection and body protection (see section 8 "Exposure Controls / Personal Protection").
Precautions for environment	Avoid release to the environment. If spilt is little, absorb any spilt liquid with an absorbent (e.g. waste) and dispose of according to regulations. If spilt is much, it should be surrounded by banking not to enter into environmental waters.

7. Handling and storage

Precautions for safe handling

Technical measure The handling should be performed on the basis of description in the section 8 "Exposure control / personal protection".

Precautions for safety handling Wash hands thoroughly after handling.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Do not eat, drink or smoke when using this product.
Use only non-sparking tools
Take precautionary measures against static discharge.
Wash contaminated clothing before reuse.

Storage Avoid irradiation of sun-light and keep substance in cool and dark condition.
Avoid contact with hot substances.

8. Exposure control / personal protection

Control concentration No setting

Allowable concentration No setting

Technical measures In the place where the substance is stored and used, provide facilities for eye washing and a shower to wash an entire body.
Install ventilation equipment.

Respiratory protection Wear appropriate respiratory protective equipment (gas filter etc.).

Hand protection Use protective gloves. The glove material must be sufficiently impermeable and resistant to the substance.

Eye protection Wear glasses with side protection.

Skin and body protection Depending on the risk, wear a suitable protective clothing or a suitable chemical protection suit.

9. Physical and chemical properties

Physical state liquid

Color yellow to brown

Odor peculiar odor

Melting point -15 °C (GESTIS)

Boiling point 215°C (HSDB)

Flamability yes

Explosion	
lower explosion limit	1.2% (GESTIS)
upper explosion limit	7.0% (GESTIS)
Flash point	90°C(Cleveland open-cup) (our company's data)
Ignition point	425°C (GESTIS)
Decomposition temperature	No data
pH	No data
Kinematic viscosity	No data
Solubility	455 mg/L (water, 25°C) (HSDB)
Partition coefficient (water/n-octanol,log Kow)	2.81 (HSDB)
Vapor pressure	0.1 hPa (GESTIS)

10.Stability and Reactivity

Reactivity	Stable under usual handling condition.
Chemical stability	Stable under usual handling condition.
Possibility for hazardous reaction	Combustion may generate harmful and corrosive gases (Nitrogen oxide).
Conditions to avoid	Store in a cool and dark place away from direct sunlight.
Incompatible materials	Oxidizing agents and reducing agents.
Hazardous decomposition products	Carbon dioxide, carbon monoxide, nitrogen oxide

11. Toxicological information

Acute toxicity	Orl-rat : LD50=1650mg/kg (HSDB) Skn-rbt : LD50 > 2000mg/kg (HSDB) Inh-rat : LC50=1.4mg/L/4H HSDB)
Skin corrosion / irritation	No data
Serious eye damage / irritation	No data
Carcinogenicity	IARC classified this substance as category 2B.
Specific target organ toxicity (single exposure)	There are some reports that the substance may cause effects on the red blood cells and may result in the formation of methaemoglobin. The effects may be delayed. (ICSC 2019)
Specific target organ toxicity (repeated exposure)	There are some reports that the substance may have effects on the respiratory organs, kidneys and liver. (ICSC 2019)

12. Environmental effect information

Ecotoxicity	
Aquatic environmental toxicity (acute)	LC50=46 mg/L(fish, 96H)[AQIRE(2013)]

Aquatic environmental toxicity (chronic)	No certain data. This substance doesn't decompose rapidly.
Harmfulness to ozone layer	Acute toxicity is classified as category 3.
	This substance is not listed in the appendix of Montreal Protocol.

13. Attention for disposal

Residual waste	For disposal, follow relevant regulations and local authority standards. Dispose of waste by consignment to a waste disposal contractor authorized by the prefectural governor, or the local municipal entity. When consigning waste to a contractor, be sure to provide sufficient notice of hazards and toxicity.
Contaminated containers and packaging	Wash and recycle the containers, or follow relevant regulations and local authority standards for disposal.

14. Transport information

International regulations	
UN No.	2810
Proper shipping name	Toxic Liquid, Organic, N.O.S.
Class	6.1
Packing group	II
Marine pollutant	Not applicable
Domestic regulations	Follow each local regulation.

15. Regulatory information (Japan)

Fire defense law	Type 4 flammable liquid, Type 3 petroleum nonaqueous solvent (Article 2 paragraph 7 of the Law, Hazardous Substance Attached Table No. 1), Danger rating III
Ship Safety Law	Toxic substances
Aviation law	Toxic substances

16. Other information

Reference	Listed next to each information.
-----------	----------------------------------

The content of this SDS was prepared based on currently available materials, and the data and evaluations are not necessarily full and complete, therefore the content must be treated with caution. Moreover, the precautions shown here are for normal handling of the product. If you intend to use the product for special purposes, additional safety measures appropriate to the application and usage may be required.