

# SAFETY DATA SHEET

## 2,4-TDA

# SDS

• According to GHS(Seventh Revised Edition)

### Section 1 Product and Company Identification

#### >Product Identifier

Product Name	2,4-Diaminotoluene
Synonyms	2,4-Toluenediamine; 4-methyl-m-phenylenedia mine
CAS No.	95-80-7
EC No.	202-453-1
Molecular Formula	C <sub>7</sub> H <sub>10</sub> N <sub>2</sub>

#### >Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Please consult manufacturer.
Uses Advised Against	Please consult manufacturer.

#### >Details of the Supplier of the Safety Data Sheet

Supplier Name	Hefei TNJ Chemical Industry Co.,Ltd.
Supplier Address	D1508 Xincheng Center, Qianshan Road. Hefei, 230022, Anhui, P.R.China
Supplier Post Code	230022
Supplier Telephone	+86-551 65418696
Supplier Fax	+86-551 65418697
Supplier E-mail	info@tnjchem.com

#### >Emergency Phone Number

Emergency Phone Number	+86-551 65418678
------------------------	------------------

### Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS(the seventh revised edition):

#### > GHS Hazard Class

Acute Toxicity -Oral	Category 3
Acute Toxicity -	Category 4

**Dermal**

<b>Sensitization -Skin</b>	Category 1
<b>Germ Cell Mutagenicity</b>	Category 2
<b>Carcinogenicity</b>	Category 1
<b>Reproductive Toxicity</b>	Category 2
<b>Specific Target Organ Toxicity(Repeated Exposure)</b>	Category 2
<b>Hazardous To The Aquatic Environment -Long-Term (Chronic)Hazard</b>	Category 2

**> GHS Label Elements****Pictogram****Signal Word****Danger****>Hazard Statements**

<b>H301</b>	Toxic if swallowed
<b>H312</b>	Harmful in contact with skin
<b>H317</b>	May cause an allergic skin reaction
<b>H341</b>	Suspected of causing genetic defects
<b>H350</b>	May cause cancer
<b>H361</b>	Suspected of damaging fertility or the unborn child
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure
<b>H411</b>	Toxic to aquatic life with long lasting effects

**>Precautionary Statements****Prevention**

<b>P201</b>	Obtain special instructions before use.
<b>P202</b>	Do not handle until all safety precautions have been read and understood.
<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.
<b>P264</b>	Wash thoroughly after handling.
<b>P270</b>	Do not eat,drink or smoke when using this product.
<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.
<b>P273</b>	Avoid release to the environment.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

<b>P312</b>	Call a POISON CENTER/doctor,if you feel unwell.
<b>P314</b>	Get medical advice/attention if you feel unwell.
<b>P330</b>	Rinse mouth.
<b>P391</b>	Collect spillage.
<b>P301+P310</b>	IF SWALLOWED:Immediately call a POISON CENTER/doctor
<b>P302+P352</b>	IF ON SKIN:Wash with plenty of water.

<b>P308+P313</b>	IF exposed or concerned: Get medical advice/attention.
<b>P333+P313</b>	If skin irritation or rash occurs: Get medical advice/attention.
<b>P362+P364</b>	Take off contaminated clothing and wash it before reuse.
<b>Storage</b>	
<b>P405</b>	Store locked up.
<b>Disposal</b>	
<b>P501</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 Composition/Information on Ingredients

Component	Concentration(weight percent,%)	CAS No.	EC No.
4-methyl-m-phenylenedia mine	100	95-80-7	202-453-1

### Section 4 First Aid Measures

#### > Description of First Aid Measures

<b>General Advice</b>	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
<b>Skin Contact</b>	Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
<b>Inhalation</b>	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim has inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
<b>Protecting of First-aiders</b>	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

#### > Most Important Symptoms and Effects, both Acute and Delayed

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

#### > Indication of Any Immediate Medical Attention and Special Treatment Needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

### Section 5 Fire Fighting Measures

#### > Extinguishing Media

<b>Suitable Extinguishing Media</b>	Dry chemical, carbon dioxide or alcohol-resistant foam.
<b>Unsuitable Extinguishing Media</b>	Do not use a solid water stream as it may scatter or spread fire.

#### > Specific Hazards Arising from the Substance or Mixture

- 1 May emit poisonous fumes on fire
- 2 Containers may explode when heated.

- 3 Fire exposed containers may vent contents through pressure relief valves.
- 4 May expansion or decompose explosively when heated or involved in fire

**>Advice for Firefighters**

As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.

- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6 Accidental Release Measure

**>Personal Precautions, Protective Equipment and Emergency Procedures**

- 1 Ensure adequate ventilation. Remove all sources of ignition.
- 2 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- 3 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

**> Environmental Precautions**

- 1 Prevent further leakage or spillage if safe to do so.
- 2 **Discharge into the environment must be avoided.**

**> Methods and Materials for Containment and Cleaning Up**

Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a

- 1 spill by bunding.
- 2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## Section 7 Handling and Storage

**> Precautions for Handling**

- 1 Handling is performed in a well ventilated place.
- 2 Wear suitable protective equipment.
- 3 Avoid contact with skin and eyes.
- 4 Keep away from heat/sparks/open flames/hot surfaces.
- 5 Take precautionary measures against static discharges.

**> Precautions for Storage**

- 1 Keep containers tightly closed.
- 2 **Keep containers in a dry, cool and well-ventilated place.**
- 3 Keep away from heat/sparks/open flames/hot surfaces.
- 4 **Store away from incompatible materials and foodstuff containers.**

## Section 8 Exposure Controls/Personal Protection

**>Control Parameters**

**Occupational Exposure Limit Values**

Component	Country/Region	Limit Value -Eight Hours		Limit Value -Short Term	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
4-methyl-m-p henylenediami ne 95-80-7	Switzerland	0.02	0.1	-	-
	Austria	0.02	0.1	0.08	0.4

**Biological Limit Values**

No information available

**Monitoring Methods**

EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment  
<sup>1</sup> of exposure to chemical and biological agents.

**2** GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air (Series standard).

**>Engineering Controls**

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

**> Personal Protection Equipment**

**Eye Protection** Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).

**Hand Protection** Wear protective gloves (such as butyl rubber), passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.

**Respiratory protection** If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

**Skin and Body Protection** Wear fire/flame resistant/retardant clothing and antistatic boots.

**Section 9 Physical and Chemical Properties****Appearance:** Light brown particles**Odor Threshold:** No information available**Melting Point/Freezing Point(°C):** 99**Flash Point(°C)(Closed Cup):** Not applicable**Flammability:** No information available**Vapor Pressure(MPa):** Not applicable**Relative Density(Water=1):** No information available**n-Octanol/Water Partition Coefficient:** 0.35**Decomposition Temperature(°C):** No information available**Particle characteristics:** No information available**Odor:** No information available**pH:** No information available**Initial Boiling Point and Boiling Range(°C):** 292**Evaporation Rate:** Not applicable

Upper/lower explosive limits [% (v/v)]: Upper limit: No information available; Lower limit: No information available

**Relative Vapour Density(Air=1):** Not applicable**Solubility:** Miscible with water**Auto-Ignition Temperature(°C):** No information available**Kinematic Viscosity(mm<sup>2</sup>/s):** Not applicable**Section 10 Stability and Reactivity****Reactivity**

Contact with incompatible substances can cause decomposition or other chemical reactions.

<b>Chemical Stability</b>	Stable under proper operation and storage conditions.
<b>Possibility of Hazardous Reactions</b>	No information available
<b>Conditions to Avoid</b>	Incompatible materials, heat, flame and spark.
<b>Incompatible Materials</b>	No information available
<b>Hazardous Decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11 Toxicological Information

### >Acute Toxicity

No information available

### >Skin Corrosion/Irritation

No information available

### >Serious Eye Damage/Irritation

No information available

### >Skin Sensitization

May cause an allergic skin reaction(Category 1)(4-methyl-m-phenylenediamine)

### >Respiratory Sensitization

No information available

### >Germ Cell Mutagenicity

Suspected of causing genetic defects(Category 2)(4-methyl-m-phenylenediamine)

### >Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	95-80-7	4-methyl-m-phenylene diamine	Category 2B	Not Listed

### >Reproductive Toxicity

Suspected of damaging fertility or the unborn child(Category 2)(4-methyl-m-phenylenediamine)

### >Reproductive Toxicity(Additional)

No information available

### >STOT-Single Exposure

No information available

### >STOT-Repeated Exposure

May cause damage to organs through prolonged or repeated exposure(Category 2)(4-methyl-m-phenylenediamine)

**>Aspiration Hazard**

No information available

**Section 12 Ecological Information****>Acute Aquatic Toxicity**

Component	CAS No.	Fish	Crustaceans	Algae
4-methyl-m-phenylenediamine	95-80-7	LC <sub>50</sub> :1170mg/L (96h) (Fish)	EC <sub>50</sub> :1.6mg/L (48h)	ErC <sub>50</sub> :9.54mg/L (96h)

**>Chronic Aquatic Toxicity**

Component	CAS No.	Fish	Crustaceans	Algae
4-methyl-m-phenylenediamine	95-80-7	No information available	NOEC:0.52mg/L	NOEC:1.0mg/L

**>Others****Persistence and Degradability**

No information available

**Bioaccumulative Potential**

No information available

**Mobility in Soil**

No information available

**Results of PBT and vPvB Assessment**

4-methyl-m-phenylenediamine does not meet the criteria for PBT and vPvB according to Regulation (EC)No 1907/2006,annex XIII.

**Section 13 Disposal Considerations****Waste Chemicals**

Before disposal should refer to the relevant national and local laws and regulation.Recommend the use of incineration disposal.

**Contaminated Packaging Disposal**

Containers may still present chemical hazard when empty.Keep away from hot and ignition source of fire.Return to supplier for recycling if possible.

**Recommendations**

Refer to section 13.1and 13.2.

**Section 14 Transport Information****Transporting Label****Marine pollutant****Yes****UN Number  
UN Proper Shipping Name**

1709

2,4-TOLUYLENEDIAMINE,SOLID

Transport Hazard Class	6.1
Transport Subsidiary	
	None
Hazard Packing Class Group	III

## Section 15 Regulatory Information

### >International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
4-methyl-m-phenylenediamine	✓	✓	✓	✓	✓	✓	✓	✓	✓

【EINECS】 European Inventory of Existing Commercial Chemical Substances.

【TSCA】 United States Toxic Substances Control Act Inventory.

【DSL】 Canadian Domestic Substances List

【IECSC】 China Inventory of Existing Chemical Substances

【NZIoC】 New Zealand Inventory of Chemicals.

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances.

【KECI】 Existing and Evaluated Chemical Substances.

【AICS】 Australia Inventory of Chemical Substances.

【ENCS】 Existing And New Chemical Substances.

#### Note

“✓” Indicates that the substance included in the regulations

“×” That no data or included in the regulations

## Section 16 Additional Information

Creation Date	2018/06/25
Revision Date	2018/06/25
Reason for Revision	

### >Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 7th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.