

# Safety Data Sheet

According to Hazard Communication Standard (29 CFR 1910.1200)

Diethylene Triamine Penta(Methylene Phosphonic Acid)(DTPMPA)

Printing date: 12/14/2016

Version 1.0

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## 1. Product and Company Identification

**Material name** Diethylene Triamine Penta(Methylene Phosphonic Acid)(DTPMPA)  
**CAS #** See section 3  
**Product code** -  
**Product use** Water treatment chemicals, scale inhibitor, dispersant.  
**Manufacturer/Supplier**  
**Supplier(Manufacturer):** Shandong Taihe Chemicals Co., Ltd  
**Address:** NO.10 East Guangming Road, Shizhong District, Zaozhuang City, Shandong Province, China  
**Contact person(E-mail):** info@thwater.net  
**Telephone:** +86-632-5113066  
**Fax:** +86-632-5112055  
**Emergency telephone Number:** +86-632-5113066

## 2. Hazards identification

### GHS classification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Eye damage/irritation	Category 1
<b>Environmental hazards</b>	Not classified	

### GHS label elements

#### Hazard Pictograms



**Signal word** Danger  
**Hazard statement** H290: May be corrosive to metals.  
H315: Causes skin irritation.  
H318: Causes serious eye damage.

### Precautionary statement

**Prevention** Keep only in original container.  
Wash hand thoroughly after handling.  
Wear protective gloves/eye protection/face protection.

**Response** Absorb spillage to prevent material damage.  
If on skin: Wash with plenty of water.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a poison center/doctor.

**Storage** Store in corrosive resistant container with a resistant inner liner.

**Disposal** Not applicable.

### 3. Composition / Information on Ingredients

Components	CAS#	Percent
Diethylene Triamine Penta(Methylene Phosphonic Acid)(DTPMPA)	15827-60-8	≥50%
Water	7732-18-5	≤50%

### 4. First Aid Measures

#### First aid procedures

**Eye contact** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Skin contact** Take off contaminated clothing and wash before re-use. Wash with plenty of soap and water. If skin irritation occurs, seek medical advice/attention.

**Inhalation** Move exposed person to fresh air. Keep person warm and at rest. If unconscious, place in recovery position and get medical attention immediately.

**Ingestion** Rinse mouth. Do not induce vomiting. If person becomes uncomfortable seek hospital.

**Notes to physician** Treat symptoms.

### 5. Fire Fighting Measure

**Flammable properties** Not available.

#### Extinguishing media

**Suitable extinguishing media** All extinguishing agents can be used (water, foam, powders, carbon dioxide, sand).

**Unsuitable extinguishing media** Not available.

**Firefighting equipment/instructions** Firefighters must wear fire resistant protective equipment. Wear self contained breathing apparatus and protective gloves.

**Hazardous combustion products** On combustion or on thermal decomposition (following the evaporation of water) releases carbon oxides. Corrosive vapours (CO + CO<sub>2</sub>) (phosphorus oxides). Above 200°C releases Phosphine. The phosphine will burn on to phosphorus pent oxide unless there is insufficient fresh air.

### 6. Accidental Release Measures

**Personal precautions** Avoid contact with skin and eyes. If spillage occurs on the public highway, indicate the danger and notify the authorities (police, fire brigade). - Full protective clothing and equipment.

**Environmental precautions** Contain the spilled material by bunding. Avoid direct discharge into drains.

**Methods for cleaning up** Recovery: Recover as much of the product as possible. Absorb the product onto porous material. Transfer the product into a spare container: suitably labeled. Then take the emergency containers to an area reserved for subsequent recycling or disposal.

Neutralization: Neutralize with: calcium hydroxide. Sodium bicarbonate Absorb spillage with: diatomaceous earth- sand or inert absorbent.

Cleaning/Decontamination: Wash non-recoverable remainder with large amounts of water.

### 7. Handling and Storage

**Handling** Handle and use in accordance with good occupational and hygiene practice.

**Storage** Recommended: Store in a cool dry area.

Incompatible products: Oxidizing agents and oxidizing materials. Alkalis and caustic products.

Packaging materials recommended: Plastic materials (polyethylene, polypropylene) - high density.

Not suitable: Metals.

## 8. Exposure Controls / Personal Protection

Control parameters:

### OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA:

Not Available

EMERGENCY LIMITS:

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Diethylene Triamine Penta(Methylene Phosphonic Acid)	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
Diethylene Triamine Penta(Methylene Phosphonic Acid)	Not Available	Not Available
Water	Not Available	Not Available

Exposure controls:

**Appropriate engineering controls:** Use in a well-ventilated area.

**Individual protection measures, such as personal protective equipment:**

**Eye / face protection**

Goggles.

**Skin protection**

Protective gloves made of PVC. Use suitable chemical-resistant protective gloves (compliant with Standard EN374-1).

Protective clothing. Safety footwear.

**Respiratory protection**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

**General hygiene considerations**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.

## 9. Physical & Chemical Properties

Appearance

**Physical state**

Liquid

**Form**

Liquid

**Color**

Brown , transparent

**Odor**

Slight

**Odor threshold**

Not available

**pH**

2.0 max (1%solution)

**Vapor pressure**

Not available

**Vapor density**

Not available

**Boiling point**

Not available

**Melting point/Freezing point**

450°C( Diethylene Triamine Penta(Methylene Phosphonic Acid))

**Solubility (water)**

Not available

**Partition coefficient**

log Pow: -3.4( Diethylene Triamine Penta(Methylene Phosphonic Acid))

**Specific gravity**

Not available

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<b>Bulk density:</b>	Not available
<b>Density</b>	1.35-1.45g/cm <sup>3</sup> (20°C)
<b>Flash point</b>	Not available
<b>Flammability limits in air, upper, %by volume</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>VOC</b>	Not available
<b>Percent volatile</b>	Not available

#### Other data

<b>Viscosity</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Flammability (solid, gas)</b>	Not available
<b>Active acid %</b>	48.0-52.0
<b>Chloride (as Cl-)%</b>	14-17
<b>Fe, mg/L</b>	35 max

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Incompatible materials. Decomposes above 200°C.
<b>Incompatible materials</b>	Oxidizing agents; alkalis and caustic products.
<b>Hazardous decomposition products</b>	On combustion or on thermal decomposition (following the evaporation of water) releases carbon oxides. Corrosive vapours (CO + CO <sub>2</sub> ) (phosphorus oxides). Above 200°C releases Phosphine. The phosphine will burn on to phosphorus pent oxide unless there is insufficient fresh air.
<b>Possibility of hazardous reactions</b>	No dangerous reactions known.

## 11. Toxicological Information

### Toxicokinetics, metabolism and distribution:

<b>Non-human toxicological data:</b>	Not available
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### Information on toxicological effects:

#### Acute toxicity:

Diethylene Triamine Penta(Methylene Phosphonic Acid)(CAS#15827-60-8)

<b>LD50(Oral, Rat):</b>	ca. 7180 mg/kg bw
<b>LD50(Dermal, Rabbit):</b>	> 7940 mg/kg bw
<b>LC50(Inhalation, Rat):</b>	Not available
<b>Skin corrosion/Irritation:</b>	Causes skin irritation.
<b>Serious eye damage/irritation:</b>	Causes serious eye damage.
<b>Respiratory or skin sensitization:</b>	Not classified
<b>Germ cell mutagenicity:</b>	Not classified
<b>Carcinogenicity:</b>	Not classified
<b>Reproductive toxicity:</b>	Not classified.
<b>STOT- single exposure:</b>	Not classified

**STOT-repeated exposure:** Not classified

**Aspiration hazard:** Not classified

## 12. Ecological Information

### Toxicity:

Diethylene Triamine Penta(Methylene Phosphonic Acid)(CAS#15827-60-8)

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	6435 mg/L	96h	Fish	OECD 203	N/A	N/A
EC50	9910 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	72h	Algae	OECD 201	N/A	N/A

**Persistence and degradability:** Diethylene Triamine Penta(Methylene Phosphonic Acid): Not inherently biodegradable.

**Bioaccumulative potential:** Not available.

**Mobility in soil:** Diethylene Triamine Penta(Methylene Phosphonic Acid): Log Koc: 3.99.

**Results of PBT&vPvB assessment:** Not available.

**Other adverse effects:** No known significant effects or critical hazards.

## 13. Disposal Considerations

**Disposal instructions** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport Information

### DOT

#### Basic shipping requirements:

**UN number** 3265

**Proper shipping name** Corrosive liquid, acidic, organic, n.o.s.\*(Diethylene Triamine Penta(Methylene Phosphonic Acid))

**Hazard class** 8

**Packing group** III

**Environmental hazards** No

### IATA

**UN number** 3265

**UN proper shipping name** Corrosive liquid, acidic, organic, n.o.s.\* (Diethylene Triamine Penta(Methylene Phosphonic Acid))

**Transport hazard class(es)** 8

**Packing group** III

### IMDG

**UN number** 3265

**UN proper shipping name** Corrosive liquid, acidic, organic, n.o.s.\* (Diethylene Triamine Penta(Methylene Phosphonic Acid))

**Transport hazard class(es)** 8

**Packing group** III

**Environmental hazards** No

## 15. Regulatory Information

### Inventory status:

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other Information

### HMIS® ratings

Health: 2  
Flammability: 1  
Physical hazard: 0

### NFPA ratings

Health: 2  
Flammability: 1  
Instability: 0

### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.

### Issue date

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