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** **Revision date: 12/14/2021**

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

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Eye damage/irritation	Category 1
Environmental hazards	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 + CO2) (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
Bulk density:	Not available
Density	1.35-1.45g/cm3 (20°C)
Flash point	Not available
Flammability limits in air, upper, %by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Auto-ignition temperature	Not available
VOC	Not available
Percent volatile	Not available
Other data	
Viscosity	Not available
Decomposition temperature	Not available
Flammability (solid, gas)	Not available
Active acid %	48.0-52.0
Chloride (as Cl-)%	14-17
Fe, **mg/L**	35 max

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Incompatible materials. Decomposes above 200°C.
Incompatible materials	Oxidizing agents; alkalis and caustic products.
Hazardous decomposition products	On combustion or on thermal decomposition (following the evaporation of water) releases carbon oxides. Corrosive vapours (CO + CO2) (phosphorus oxides). Above 200°C releases Phosphine. The phosphine will burn on to phosphorus pent oxide unless there is insufficient fresh air.
Possibility of hazardous reactions	No dangerous reactions known.

11. Toxicological Information

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: Not available **Information on toxicological effects:**

Acute toxicity:

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

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