



North Metal and Chemical Company

1. Company Identification:

Product Name : North DTPMPA
Synonyms : **NorthQuest 6200**; MayQuest 1860, PCI 1500
Product Use : Scale inhibitor and dispersing agent for use in industrial water treatment programs.
Chemical Name : Diethylenetriamine Penta (methylenephosphonic acid), DTPMPA.
Manufactured for : **North Metal and Chemical Company**
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York, PA USA 17405 York, PA USA 17405
Tel: 717-845-8646 Fax: 717-846-7350
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In Case of Emergency Call CHEMTREC (24 Hours): 1-800-424-9300 (USA & CANADA)

2. Hazard Identification:

GHS Classification:

Corrosive to Metal (Category 1)
Skin Corrosion (Category 1B)
STOT SE (Category 4)

Signal Word: Danger

Pictograms:



HAZARD STATEMENTS:

H290: May be corrosive to metals
H314: Causes severe skin burns and eye damage
H335: May cause respiratory irritation

PRECAUTIONARY STATEMENTS:

Prevention:

P234: Keep only in original packaging
P260: Do not breathe dust/fumes/gas/mist/vapors/spray
P264: Wash all affected body parts thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353: IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P406: Store in a corrosive resistant container with a resistant inner liner.
P501: Dispose of contents/container in accordance with all applicable laws and regulations.

3. Composition/Information on Ingredient:

Chemical Name : Diethylenetriamine Penta (methylenephosphonic acid)
Chemical Family : Phosphonates
Chemical Formula : No Data Available
CAS Number : 15827-60-8

| Substance: | CAS Number: | Hazard | Compo. (%) |
|---|-------------|--------|------------|
| Diethylenetriamine Penta (methylenephosphonic acid) | 15827-60-8 | N/A | > 50.1 % |
| Hydrochloric Acid | 7647-01-0 | N/A | 12-17 % |
| Phosphonic Acid | 13598-36-2 | N/A | < 5 % |

4. First Aid Measures:

General Advice: If victim is unconscious, get medical attention immediately. Place the unconscious victim in recovery position and maintain an open airway. Loosen tight clothing.

Inhalation: If safe to do so, remove individual from further exposure. Keep warm and at rest. Seek medical attention. In case of breathing difficulties, administer oxygen. If breathing has stopped, give artificial respiration.

Skin contact: Flush skin with plenty of running water. Remove contaminated clothing. Get medical attention immediately. Clean and dry contaminated clothing thoroughly before reuse.

Eye contact: Flush with running water for at least fifteen minutes, periodically lifting upper and lower eyelids. Remove any contact lenses if safe to do so. Get medical attention immediately.

Ingestion: If the product is swallowed, rinse mouth with large quantities of water and call doctor/poison center immediately. Drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

In case of inhalation: Burns

In case of ingestion: Burns, gastrointestinal complaints

When swallowed and vomited immediately, aspiration into the lungs may occur resulting in chemical pneumonia or suffocation.

5. Fire Fighting Measures:

Flash Point (°C): No data available. **Flammable Limits:** No data available.

Auto ignition Temp.: No data available. **Decomposition Temp:** No data available.

Flame Propagation or Burning Rate of Solids: No data available.

General Hazard: Evacuate personnel in a manner to avoid inhalation of irritating and/or harmful fumes and smoke.

Extinguishing Media: Water spray, chemical-type foam, carbon dioxide. Do not use high power water jet. Appropriate for the surrounding area.

Hazardous Decomposition

Products: Oxides of carbon (CO_x), nitrogen (NO_x), and phosphorous compounds such as phosphorus oxides and phosphines.

Fire Fighting Hazards: Fires in the immediate vicinity may cause the development of dangerous vapors. In the event of a fire, the following may be product when the water evaporates: phosphorous compounds, carbon monoxides and carbon dioxides.

Fire Fighting Procedure/Equipment: Respiratory and eye protection are required for fire fighting personnel. Full protective equipment (bunker gear) and self-contained breathing apparatus (SCBA) should be used for all fires. Evacuate area and fight fire from safe distance or a protected location. Move fire-exposed containers, if allowable without sacrificing the safety of others and firefighters. If possible and without risk, firefighters should control run-off water to prevent environmental contamination.

DO NOT ALLOW WATER USED TO EXTINGUISH FIRE TO ENTER DRAINS, GROUNDS OR WATER WAYS. TREAT RUNOFF AS HAZAROUS.

6. Accidental Release Measures:

Protective Gear for Personnel:

For Small Spill: Safety glasses or chemical splash goggles, chemically resistant gloves, chemically resistant boots, and any appropriate body protection to minimize direct contact to the skin. Wear respiratory protection. Avoid dust formation. Avoid breathing dust or mist.

For Large Spill: Triple gloves (rubber and nitrile over latex), chemical resistant suit, boots, hard hat, full face mask/an air purifying respirator (NIOSH approved). Self contained breathing apparatus must be worn in situations where fumigant gas generation and low oxygen levels are a consequence of contamination from the leak.

Spill Clean-up Procedures:

General Procedure: Remove all sources of ignition from spill area. Ventilate area. Do not let chemicals/waste enter land or water environment.

For Small Spill: In the event of a small spill, the spill should be swept up or contained with an absorbent pad and placed in a properly labeled waste container immediately. Wash the spill area and contain the waste in a labeled waste container without letting the wash enter the sewer/environment. Dispose the spill/waste according to state, federal and local hazardous waste regulations.

For Large Spill: In the event of a large spill, contain the spill immediately with dikes and dispose according to state, federal, and local hazardous waste regulation.

Environmental Precaution

7. Handling and Storage:

Handling: Use appropriate personal protective equipment as specified in Section 8. Handle the product in a well-ventilated area. Handle in a manner consistent with good industrial/manufacturing techniques and practices. Keep away from combustible materials. Wash hands thoroughly with soap and water after use. Remove contaminated clothing and protective equipment before entering eating areas.

Storage: Store in a cool, dry well-ventilated area. Keep containers closed when not in use. Keep product isolated from incompatible materials/conditions such as freezing temperatures.

Qualified Materials: Glass, PVC, polypropylene, polyethylene

Unqualified Materials: Aluminum, Steel, metals.

Storage temperature: > -10 °C. Shelf life: 24 Months

Empty containers retain vapor and material residue. Observe all recommended safety precautions until container is cleaned, reconditioned or destroyed.

8. Exposure Controls and Personal Protection:

Engineering Controls: Use appropriate engineering controls to minimize exposure to vapors generated via routine use. Maintain adequate ventilation of workplace and storage areas.

Personal Protective Equipment:

Eyes and face: Wear NIOSH approved safety glasses with side shields or goggles when handling this material.

Hand: **Protective gloves**

Qualified materials: PVC, polyethylene, Polypropylene

Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Body: Avoid direct contact with skin. Wear chemically resistant gloves, apron, boots or whole bodysuit when handling this product.

Respiratory: Avoid breathing vapor or mist. Use respirators and components tested and approved under appropriate government standards such as NIOSH or CEN. Where risk assessment shows air-purifying respirators are appropriate use a full face particle respirator type N100 or type A P2 respirator cartridges as a back up to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Work Hygienic Practices: Facilities storing or using this material should be equipped with emergency eyewash, and a safety shower. Good personal hygiene practices should always be followed.

| <u>Component</u> | <u>Identification No.:</u> | <u>Limit Value</u> |
|---|----------------------------|--|
| Diethylenetriamine Penta (methylenephosphonic acid) | 15827-60-8 (CAS) | N/A |
| Hydrochloric Acid | 7647-01-0 (CAS) | NIOSH REL: C 5ppm (7mg/m ³) OSHA PEL: C 5 ppm (7mg/m ³) |
| Phosphonic Acid | 13598-36-2 (CAS) | N/A |

9. Chemical and Physical Properties:

| | | | |
|-----------------------|---------------------|------------------------------|------------------------------|
| Appearance | : Brown Liquid | Vapor Pressure | : No Data Available |
| Odor | : Characteristic | Vapor Density | : No Data Available |
| Odor threshold | : Not applicable | Specific Gravity | : 1.35 - 1.45 @ 20°C |
| Color | : Brown | Solubility | : Fully Miscible in water |
| pH | : 2.0 max @ 20°C | Partition Coefficient | : -3.4 logP (o/w) - DTPMPA |
| Melting Point | : -25°C | Viscosity (Kinematic) | : No Data Available |
| Freezing Point | : No Data Available | Decomposition Temp. | : > 200°C (Thermal - DTPMPA) |
| Boiling Range | : No Data Available | | |
| Flash Point | : No Data Available | | |

10. Stability and Reactivity:

Stability: The product is stable under normal ambient conditions of temperature and pressure.

CORROSIVE TO METALS (ALUMINIUM & STEEL)

Polymerization: Polymerization will not occur.

Hazardous

Decomposition Products: In case of fire the following may be liberated: nitrogen oxide (NO_x), phosphorous oxides, phosphine, carbon monoxide and carbon dioxide.

Incompatible Materials: Strong oxidizing agents, alkalis, and caustic substances. Reacts with steel and aluminum.

Conditions to Avoid: Avoid exposure to extreme temperatures, contact with incompatible chemicals, uncontrolled contact with accelerants.

11. Toxicological Information:

Acute Oral Toxicity:

LD50 Oral - Rat: > 4164 mg/kg (DTPMPA)

Acute Dermal Toxicity:

LD50 Dermal - Rabbit: >4605 mg/kg (DTPMPA).

Acute Inhalation Toxicity:

LD50 Inhalation - Rat: No data available.

Corrosion/Irritation:

Skin : Causes severe skin burn and eye damage.

Eyes : Strongly Irritant (OECD 405) - DTPMPA

Carcinogenicity : No data available

Skin Sensitization : Not sensitizing (Guinea pig)

Mutagenicity* : Ames Test: Negative, Gene-mutations mammalian cells: negative

Reproductive Effects : NOAEL (P) Rat, Oral: 294 - 312 mg/kg bw/d

Teratogenic Effects : NOAEL Rat, oral: 312 mg/kg bw/d

Specific target organ toxicity: May cause respiratory irritation (Single exposure)

Routes of Exposure : Eyes, Skin, Inhalation, Ingestion

In case of inhalation: Burns

In case of ingestion: Burns, gastrointestinal complaints.

When swallowed and vomited immediately, aspiration into the lungs may occur resulting in chemical pneumonia or suffocation.

12. Ecological Information:

All work practices must be aimed at eliminating environmental contamination.

| | |
|--------------------------|---|
| Toxicity: | Harmful effects on water organisms by modification of pH value |
| Algae Toxicity: | ErC50 Pseudokirchneriella subcapitata (green algae): > 10mg/L/95h |
| Daphnia Toxicity: | EC50 Daphnia magna (big water flea): 242 mg/L/48h |
| Fish Toxicity: | LC50 Oncorhynchus mykiss: 180 - 252 mg/L/96h (OECD 203) NOE Oncorhynchus mykiss: 25.6 mg/L/60d |

Water hazard class: 1 - slightly hazardous to water.

Persistence and degradability:

Biodegradability: Product is not readily biodegradable.

Bioaccumulative Potential: No indication of bioaccumulation potential.

Mobility in Soil: No data available.

Other Adverse Effects: Do not allow to enter into ground water, surface water or drains.

13. Disposal Considerations:

| | |
|---------------------------|--|
| Disposal Method : | Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations. |
| For Large Spills : | Contain material and call local authorities for emergency assistance. |
| Product Disposal : | Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable local, state and federal laws, regulations and product characteristics at time of disposal. |
| Empty Container : | Contaminated container should be labeled and disposed in accordance to local, state and federal laws and regulations. |
| General Comments : | Refer to section 6, accidental release measures, for additional information. |

14. Transport Information:

| Regulatory Information | UN No. | Proper Shipping Name | UN Class | Packing Group | Label |
|------------------------|--------|--|----------|---------------|-----------|
| US DOT | 3265 | Corrosive Liquid, Acidic, Organic, N.O.S. (Phosphonic Acid) | 8 | III | Corrosive |
| IMDG | 3265 | Corrosive Liquid, Acidic, Organic, N.O.S. (Phosphonic Acid) | 8 | III | Corrosive |

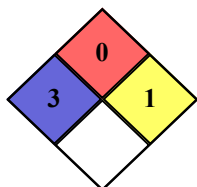
15. Regulatory Information:

U.S. Federal Regulations:

| | |
|---|--|
| TSCA Status: | All components of this product are in compliance with TSCA |
| CERCLA Section 103 (40 CFR 302.4): | No components of this products are listed. |
| Section 311/312 Categorizations (40 CFR 370): | Acute Health Hazards |
| SARA Section 313: | No components of this products are listed. |

16. Other Information:

NFPA Rating:*



*NFPA Key:

| |
|--------------------------|
| HEALTH 3 - Serious |
| FLAMMABILITY 0 - Minimal |
| REACTIVITY 1 - Slight |
| SPECIFIC HAZARD —None |

HMIS Rating:*

| | |
|---------------------|---|
| HEALTH | 3 |
| FLAMMABILITY | 0 |
| PHYSICAL HAZARD | 1 |
| PERSONAL PROTECTION | X |

*HMIS Key:

| |
|------------------------------|
| HEALTH 3—Serious |
| FLAMMABILITY 0 - Minimal |
| PHYSICAL HAZARD 1 - Slight |
| PERSONAL PROTECTION X — None |

Revision Date: February 13, 2024
Reason for Revision: Updated proper shipping name in Section 14

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