NorthQuest 6700 HPAA
Safety Data Sheet

North Metal and Chemical Company

1. Company Identification:

Product Name : Hydroxyphosphono-Acetic Acid

Synonyms : **NorthQuest 6700:** HPAA; HPA; Acetic Acid, Hydroxyphosphono; Glycolic Acid, Phosphono; Alpha-hydroxyphosphonoacetic acid; 2-Hydroxyphosphonoacetic acid; Phosphonogylcolic Acid

Product Use : An organic corrosion inhibitor for mild steel in cooling water treatment programs.

Manufactured for : **NORTH Metal and Chemical Company**

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2. Hazard Identification:

GHS Classification:
Acute Oral Toxicity (Category 5)
Acute Inhalation Toxicity (Category 5)
Skin Irritation (Category 2)
Serious Eye Damage (Category 1)
Corrosive to Metals (Category 1)

Signal Word: Danger
Pictograms:

Hazard Statements:

H290 : May be corrosive to metals.
H303 : May be harmful if swallowed.
H333 : May be harmful if inhaled
H315 : Causes skin irritation.
H318 : Causes serious eye damage.

Precautionary Statements:

P280 : Wear protective gloves (rubber/PVC)/protective clothing such as apron, boots and safety glasses with side shields.
P264 : Wash all affected body parts thoroughly after handling.
P273 : Avoid release to the environment.
P234 : Keep only in original packaging.
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor/physician.
P310 : Immediately call a POISON CENTER/doctor
P302 + P352 : IF ON SKIN: Wash with plenty of soap and water
P332 + P313 : If skin irritation or rash occurs: Get medical advice/attention..
P301 + 312 : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + P340 : IF INHALED: Remove person to fresh air and keep in position comfortable for breathing
P391 + P501 : Collect Spillage. Dispose of contents/container in accordance with local/state/federal regulations.
P406 : Store in corrosive resistant Glass, PVC, PP or PE container/in container with a resistant inner liner

3. Composition/Information on Ingredient:

Chemical Name : Hydroxyphosphono-acetic acid; HPAA

Chemical Family : Phosphonates

Chemical Formula : $C_2H_5O_6P$

EC Number : 405-710-8

Substance:	CAS Number:	Hazard	Compo. (%)
Hydroxyphosphono-acetic acid	23783-26-8	See Section 2	30-60%
Phosphonic Acid	13598-36-2	-	1-5%
Water	7732-18-5	-	Proprietary

4. First Aid Measures:

Eyes : Flush skin with running water for at least fifteen minutes. Remove any contact lenses. Get medical aid/ attention immediately.

Skin : Remove contaminated clothing. Wash skin with plenty of running water and soap. Get medical attention/ aid if irritation persists. Contaminated clothing should be washed before use.

Ingestion : If the product is swallowed, first rinse mouth. Give large amount of water to drink. Call doctor/ physician/poison center immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person. If a person vomits, place him/her in recovery position. Aspiration may cause pulmonary edema and pneumonitis.

Inhalation : If safe to do so, remove individual from further exposure. Keep warm and at rest. If breathing has ceased, give artificial respiration. Get medical attention/consult a physician.

Medical conditions likely to be aggravated by exposure: May cause central nervous system effects. May cause cardiovascular disturbances. Causes eye and skin burns. May cause severe respiratory or digestive tract irritation with possible burns.

Note to Physician : Treat symptomatically.
PPE for first responders : Gloves and safety goggles are highly recommended.

5. Fire Fighting Measures:

Flash Point (°C) : Not available.

Flammable Limits : Not available.

General Hazard : Evacuate personnel downwind in-order to avoid inhalation of irritating and/or harmful fumes and smoke.

Extinguishing Media : Water spray, alcohol resistant foam, dry chemical powder or carbon dioxide. Appropriate for the surrounding area. Do not use a high-power water jet.

Hazardous Combustion Products : Fire may cause evolution of corrosive vapors of phosphorous oxides, carbon monoxide and carbon dioxide.

Fighting Procedures : Hazardous decomposition and combustion products such as phosphorous and carbon oxides can be formed if product is burning. Cool exposed containers with water spray to prevent overheating.

Fire Fighting 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 the firefighters. Firefighters should control run-off water to prevent environmental contamination.—Do not release to sewers or waterways.

Sensitivity to Static Discharge : Not sensitive.

Sensitivity to Mechanical Impact : Not sensitive.

6. Accidental Release Measures:

Protective Gear for Personnel:

For Small Spill : Safety glasses or chemical splash goggles, chemically resistant gloves (rubber), chemically resistant boots, and any appropriate body protection to minimize direct contact to the skin. Wear respiratory protection to avoid inhaling vapors.

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:

For Small Spill : In the event of a small spill, the spill should be absorbed in vermiculite or dry sand and placed in a properly labeled waste disposal container immediately. Do not use water for clean up. Do not let chemical/waste enter the environment. Dispose as per instructions in section 13.

For Large Spill : In the event of a large spill, contain the spill immediately and dispose the spill/waste according to state, federal, and local hazardous waste regulation. Do not let chemical/waste enter the environment.

Environmental Precaution : Water spill: use appropriate containment to avoid run off or release to sewer or other waterways.
Land spill: use appropriate containment to avoid run off or release to ground.
General precaution: remove containers of strong acid, alkali and incompatible materials from the release area.

Release Notes : If spill could potentially enter any waterway, including intermittent dry creeks, contact local authorities.

7. Handling and Storage:

Handling : Use appropriate personal protective equipment as specified in Section 8. Handle in a well-ventilated area. Handle in a manner consistent with good industrial/manufacturing techniques and practices. 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 containers isolated from incompatible materials/conditions such as heat and ignition sources. Protect against physical damage and check regularly for leaks. Do not store with oxidizing agents, alkalis, or cyanides. Protect from light, including direct sun rays. Do not store in Carbon Steel containers.

8. Exposure Controls and Personal Protection:

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

Personal Protective Equipment : **Eyes and face:** Wear safety glasses with side shields or face shield when handling this material.
Skin: Avoid direct contact with skin. Wear chemically resistant gloves (PVC/rubber), apron, boots or whole chemically resistant bodysuit when handling this product.
Respiratory: Avoid breathing vapor or mist. If risk of overexposure, use NIOSH approved respiratory protection equipment. If used, full face-piece replaces the need for face shield and/or chemical goggles. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.

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.

Exposure Limits:

		OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Substance:	**CAS No.:**	**STEL**	**TWA**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Hydroxyphosphono-acetic acid	23783-26-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phosphoric Acid	7664-38-2	3 mg/m^3	1 mg/m^3	1 mg/m^3	3 mg/m^3			1000 mg/m^3

9. Chemical and Physical Properties:

Appearance	: Liquid	**Evaporation Rate**	: Not available
Odor	: Slight	**Lower Explosive Limit**	: Not available
Odor threshold	: Not available	**Upper Explosive Limit**	: Not available
Color	: Dark Brown	**Vapor Pressure**	: Not available
pH (1% solution)	: 1.0 - 3.0	**Vapor Density**	: Not available
Melting Point	: -12 °C	**Specific Gravity**	: 1.300 - 1.500 @ 20°C
Freezing Point	: -5 °C	**Solubility**	: Soluble
Boiling Range	: 101 - 103°C @ 760 mm hg	**Partition Coefficient**	
Flash Point	: Not data available	**n-octanol/water**	: <0
Ignition Temp.	: No data available	**Viscosity**	: max 75 cps @ 25°C
Thermal Decomposition	: >160	**Molecular Weight**	:156.03

10. Stability and Reactivity:

Stability : The product is stable under recommended storage and handling conditions.

Hazardous Polymerization : Polymerization will not occur.

Hazardous Decomposition Products : Gives off hydrogen by reaction with metals. Oxides of carbon and oxides of phosphorous formed under decomposition/fire.

Materials to Avoid : Corrodes base metals. Strong oxidizing agents, alkalis, and reducing agents

Conditions to Avoid : Avoid exposure to extreme temperatures, incompatible materials, & combustible materials.

11. Toxicological Information:

Acute Oral Toxicity:

LD_{50} Oral - Rat: > 2754 mg/kg

Acute Inhalation Toxicity:

LC_{50} Inhalation : No data available

Acute Dermal Toxicity:

LD_{50} Dermal : No data available

Corrosion/Irritation:

Skin : Skin irritation 2; H315 = Causes skin irritation

Eyes : Eye damage/irritation: Eye Damage 1; H318 = causes serious eye damage

Carcinogenicity	: IARC, NTP, OSHA, ACGIH*: Not listed*	**Sensitization**	: Skin potential
Mutagenicity	: No data available.	**Reproductive Effects**	: No data available.
Teratogenic Effects	: No data available.		

Routes of Exposure : Eyes, Skin, Inhalation, Ingestion

Potential Health Effects:

Eyes	: Causes serious eye damage.
Skin	: Can cause burns to the skin. May cause sensitization by skin contact
Inhalation	: May be harmful if inhaled. Can cause irritation to the respiratory tract and can induce coughing.
Ingestion	: May be harmful if swallowed. May cause stomach pain or vomiting.

12. Ecological Information:

All work practices must be aimed at eliminating environmental contamination.

Biodegradability in Soil/Water : The product is expected to be biodegradable

Bioaccumulative Potential : Potential is low. Secondary poisoning via the food chain is unlikely to occur

Terrestrial Ecotoxicity : This material can be harmful or fatal to contaminated plants or animals, especially if large volumes are released into the environments.

Aquatic Ecotoxicity (Acute)
Fish Toxicity : Danio rerio (Zebrafish): - LC_{50} >820 mg/L/96h

Aquatic Invertebrates : Daphnia magna (Big Water Flea) EC_{50} 140 mg/L/48
: Algae IC_{50} 30 mg/L/72h

Mobility in Soil : This product is miscible with water. May spread in water systems.

Other Adverse Effects : Do not allow to penetrate into soil, water bodies, 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. (Hydroxyphosphono-acetic acid)	8	II	Corrosive Sticker
IMDG	3265	Corrosive Liquid, Acidic, Organic, N.O.S. (Hydroxyphosphono-acetic acid)	8	II	Corrosive Sticker
IATA	3265	Corrosive Liquid, Acidic, Organic, N.O.S. (Hydroxyphosphono-acetic acid)	8	II	Corrosive Sticker

15. Regulatory Information:

U.S. FEDERAL REGULATIONS:

TSCA: The ingredients of this product are listed on the TSCA inventory.

CERCLA: No components of this product are listed.

SARA TITLE III (EPCRA) Section 313: No components of this product are listed.

SARA TITLE III (EPCRA) Section 311/312: Immediate (Acute) Health Hazard

Canadian WHMIS Classification: D2(B) - Materials causing other toxic effects; E—Corrosion Material

OSHA: This product is Hazardous under the OSHA Hazard Communication standard

California Proposition 65: Not listed

Acute health hazard - Yes
Chronic health hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

16. Other Information:

HMIS and NFPA Rating Scale:
HMIS: Hazardous Materials Identification System
NFPA: National Fire Protection Association

Numeric Scale for Health (Blue), Flammability (Red), and Physical Hazard (Yellow):

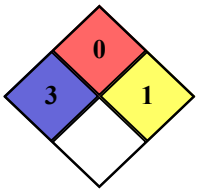
HMIS Rating:*

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	C

***HMIS Key:**

HEALTH 3–Serious
FLAMMABILITY 0 – Minimal
PHYSICAL HAZARD 1 – Slight
PERSONAL PROTECTION C – Gloves + Safety Goggles + Chemical Apron

NFPA Rating:*



***NFPA Key:**

HEALTH 3 – Serious
FLAMMABILITY 0 – MInimal
REACTIVITY 1 – Slight
SPECIFIC HAZARD –None

Revision Date: April 6, 2022

Reasons for Revision: Updated logo and contact information. Reviewed for accuracy.

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