1. Company Identification and Product Hazard Overview:

Product Name : North*Quest* EDTA XL; Ethylenediaminetetraacetic Acid, Tetrasodium salt (40% aqueous solution)

Synonyms : Tetrasodium EDTA

Recommended Use : Chelating Agent; sequesters metal ions.

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

P. O. Box 1985
York, PA USA 17405
Tel: 717-845-8646
Email: north@nmc-nic.com

609 E. King St.
York, PA USA 17403
Fax: 717-846-7350
Website: www.nmc-nic.com

In Case of Emergency: Call CHEMTREC (24H): 1-800-424-9300

2. Hazard Identification:

GHS Classification:
Acute Toxicity, Inhalation (Category 4)
Acute Toxicity, Oral (Category 4)
Skin Irritation (Category 5)
Respiratory Irritation (Category 3)
Eye Damage (Category 1)
Corrosive to metals (Category 1)

Signal Word: DANGER
Pictograms: Corrosion, Acute Toxicity, Health Hazard

Hazard Statements:

H290	**:** May be corrosive to metals
H313	: May be harmful if in contact with skin
H332	: Harmful if inhaled
H302	: Harmful if swallowed
H305	**:** May be harmful if swallowed and enters airways
H318	: Causes serious eye damage
H335	: May cause respiratory irritation

Precautionary Statements:
Prevention:

P233	: Keep container tightly closed
P261	: Avoid breathing dust/fume/gas/mist/vapors/spray
P264	: Wash contact area thoroughly after handling
P271	: Use only outdoors or in a well-ventilated area
P280	**:** Wear protective gloves/protective clothing/eye protection/face protection.
P281	: Use personal protective equipment as required

2. Hazard Identification:

Precautionary Statements:

P303 + P361 +P353	**:** IF ON SKIN or hair: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P333 + P313	: IF skin irritation or rash occurs: Get medical advice/attention.
P305 + P351 + P338	**:** IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P330 + P331 +P311	: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON Center or doctor/ physician.
P304 + P340	**:** IF INHALED: Remove person to fresh air and keep in position comfortable for breathing
P332 + P313	: If skin irritation occurs: Get medical advice/attention
P337 + P313	: If eye irritation persists: Get medical advice/attention
P312	**:** Call a POISON CENTER or doctor/physician if you feel unwell
P403 + P235	: Store in a well-ventilated place. Keep cool.
P501	**:** Dispose of contents/container in accordance with local/state/federal regulations.

3. Composition/Information on Ingredient:

Chemical Name **:** North*Quest* EDTA XL

Chemical Family **:** Chelating Agent

Chemical Formula **:**

Substance:	CAS Number:	Compo. (%)
Water	7732-18-5	balance
Tetrasodium ethylenediamine tetraacetate	64-02-8	38.0 - 41.0%
Ethylenediaminetriacetic acid, Trisodium salt (ED3ANa3)	19019-43-3	< 0.3
Sodium hydroxide	1310-73-2	0.1 - 1.9%

4. First Aid Measures:

General Advice: : Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eyes **:** Flush skin with running water for at least fifteen minutes. Remove any contact lenses. Get medical aid/ attention immediately. Continue to rinse eyes during transport to the hospital.

Skin **:** Remove contaminated clothing. Wash skin with plenty of running water and soap. Take victim immediately to the hospital. Consult a physician.

Ingestion **:** If the product is swallowed, first rinse mouth. Give small 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 so the vomit does not enter lungs.

Inhalation **:** If safe to do so**,** remove individual from further exposure. Keep warm and at rest. If breathing has ceased, give artificial respiration. Do not give mouth to mouth resuscitation. Get medical attention/ consult a physician immediately.

Note to Physician **:** Treat symptomatically.

PPE for first responders **:** Gloves and safety goggles are highly recommended.

Indication of immediate medical Attention needed : Chemical eye burns may require extended irrigation. Obtain a prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach, and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of the symptoms and the clinical condition of the patient.

5. Fire Fighting Measures:

Flash Point (°C) : Not applicable

Flammable Limits : Not applicable

Auto ignition Temp. : Not applicable

Flammable Class : Not applicable

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

Extinguishing Media : Use water fog or spray, dry chemical, foam or carbon dioxide extinguishing agents.

Special hazards arising from the substance : Carbon monoxide, Carbon dioxide, metal oxides, and Nitrogen Oxides (NOx)

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

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 indoor fires and any significant outdoor 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. If possible, firefighters should control run-off water to prevent environmental contamination.

6. Accidental Release Measures:

Protective Gear for Personnel : Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental Precaution : Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up : Contain spillage. Soak up liquid residue with a suitable absorbent such as non-combustible material. Collect in suitable and properly labeled containers for disposal. Then flush the area with water. CAUTION: The spill area may be slippery.

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

7. Handling and Storage:

Handling : Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Do not Swallow. Wash thoroughly after handling. Use with adequate ventilation Do not eat, drink, or smoke when handling this product.

Storage : Store in a cool, dry well-ventilated area. Keep containers closed and up right when not in use. Isolate from incompatible materials such as strong oxidizing agents. Store in PVC, PE, or stainless steel containers. Keep product isolated from incompatible materials/conditions. Avoid contact with aluminum , copper, copper alloys, nickel and zinc.

Shelf life: Use within 24 months. Retest if stored more than 3 years.
Storage Temperature: Below 85°F/35°C

8. Exposure Controls and Personal Protection:

Exposure Limits

Component	List	Type	Value
Sodium Hydroxide	ACGIH	Ceiling	2 mg/m3
	OSHA	PEL	2 mg/m3
	NIOSH	Ceiling	2 mg/m3

Immediately Dangerous To Life or Health Concentrations (IDLH/NIOSH): **Sodium Hydroxide = 10mg/m3**

Engineering Controls : Use appropriate engineering controls to avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product. Use local exhaust ventilation.

Personal Protective Equipment : **Eyes and face:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.

Skin: Avoid direct contact with skin. Wear rubber gloves, apron, boots or whole bodysuit when handling this product. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of any contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

: **Body Protection:** Complete suit protecting against chemicals; flame retardant anti-static protective clothing. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific work place.

: **Respiratory:** Where risk assessment shows air-purifying respirators are appropriate, use full-face respirator with multi-purpose combination 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. Use respirators and components tested and approved under appropriate government standards such as NIOSH.

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.

Control of Environmental Exposure :Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Chemical and Physical Properties:

Appearance : Liquid

Odor : Mild; slight ammonia

Odor threshold : Not available

Color : Colorless to yellow

pH : 11.0 - 11.8 (1% solution)

Melting Point : Not applicable

Freezing Point : ≤ -18°C

Boiling Range : 106°C

Flash Point : None

Viscosity @ 20 °C : Not available

Evaporation Rate : < 0.8 estimated

Lower Explosive Limit : Not applicable

Upper Explosive Limit : Not applicable

Vapor Pressure : same as water

Vapor Density : same as water

Relative Density : Not available

Solubility : completely miscible in water

Specific Gravity : 1.26 - 1.30

Partition coefficient (n-octanol/water) : Log Pow < 0

Auto Ignition Temp. : Not available

Molecular Weight : 380.2 g/mol

Viscosity :~ 19 mPas @ 20°C

Decomposition Temp : >392°F/200°C (solid);
: >224.6°F/>107°C (water loss)

10. Stability and Reactivity:

Stability : The product is stable under recommended storage conditions.

Reactivity : No dangerous reaction known under conditions of normal use.

Possibility of Hazardous Reactions : Polymerization will not occur

Hazardous Decomposition Products : Depends upon temperature, air supply, and the presence of other materials. Decomposition products can include and are not limited to Ammonia, Carbon oxides, Nitrogen Oxides, and water vapor.

Incompatible Materials : Avoid contact with Oxidizers. Flammable Hydrogen may be generated from contact with metals such as Aluminum. Avoid contact with aluminum, nickel, zinc, copper, and copper alloys.

Conditions to Avoid : Some components of this product can decompose at elevated temperatures.

11. Toxicological Information:

Acute Toxicity Data:
LD50 Ingestion - Rat - 3,030 mg/kg
LD50 Dermal - Rabbit - > 5,000 mg/kg

Tetrasodium EDTA:
LD50 Oral = 1,780 mg/kg

Related product Disodium EDTA
LC50 Inhalation: 4h; 1,000 - 5,000 mg/m3 (maximum attainable concentration)

Skin corrosion/irritation:
Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause more severe response if skin is abraded (scratched or cut). May cause more sever response on covered skin (under clothing, gloves). Mist may cause skin irritation. Not classified as corrosive to the skin according to DOT guidelines. Sodium Hydroxide component is corrosive to the skin.

Serious eye damage/eye irritation:
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Sodium Hydroxide component is severely irritating to the eyes.

Respiratory or skin sensitization:
No data available. Sodium Hydroxide component is severely irritating to the respiratory tract.

Chronic Toxicity:
No data available for this product
NOAEL = 500 mg/kg (90-day oral study with Disodium EDTA)
NOAEL ≥ 500 mg/kg (104-week oral study with Trisodium HEDTA)
LOAEC = 30/ mg/m3 (5-day inhalation test with Disodium EDTA)

Carcinogenicity:
The Trisodium salt of EDTA did not cause cancer in laboratory animals.

Developmental Toxicity: EDTA and its sodium salts have been reported to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation.

Reproductive Toxicity: No relevant data found

Genetic Toxicology: Most data indicate the EDTA and its salts are not mutagenic. Minimal effects are reported likely due to trace metal deficiencies resulting from chelating by EDTA.

11. Toxicological Information:

Reproductive Toxicity
No data available for the mixture.
EDTA and its sodium salts have been reported, in some studies, to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus.

Specific target organ toxicity - single exposure:
No data available

Specific target organ toxicity - repeated exposure:
No data available

Aspiration Hazard:
No data available

Additional Information:
RTECS: NC3500000
Incoordination,. Mydriasis., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly been investigated.

12. Ecological Information:

All work practices must be aimed at eliminating environmental contamination.

Ecotoxicity:
The following data is available for several related EDTA products.
Fish (bluegill): 96h LC50 > 1,000 mg/L
Fish (zebra fish): 35-day NOEC ≥ 25.7 mg/L
Daphnia magna: 48h EC50 = 140 mg/L; 21-day NOEC = 25 mg/L
Algae: 72h EC50 > 500 mg/L

Sodium Hydroxide: Fish (various species): 96h LC50 = 33 to 189 mg/L

Biodegradability:	Inherently biodegradable - EDTA (acid form) and its salts are not readily biodegradable. Under special conditions like adaptation or slightly alkaline pH, which is realistic under environmental surface water conditions, the biodegradability of EDTA is considerably enhanced, and as such, EDTA is considered ultimately biodegradable.
Bioaccumulative Potential:	Potential is low (BCF 1– 2; Log Pow < 0)
Chemical Fate:	The substance is not expected to enter the atmosphere significantly due to its high water solubility. C.O.D. is approximately 260 mg/g
Mobility in soil:	No adsorption expected onto soil due to ionic structure. The test substance will preferably distribute into the water compartment and not evaporate form the water surface.

13. Disposal Considerations:

Disposal Method	**:** Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations. DO NOT DUMP INTO ANY SEWERS OR INTO ANY BODY OF WATER.
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	Labels
US DOT	3267	Corrosive Liquids, BASIC, Organic, N.O.S.	8	III	Corrosive Sticker
IMDG	3267	Corrosive Liquids, BASIC, Organic, N.O.S.	8	III	Corrosive Sticker
IATA	3267	Corrosive Liquids, BASIC, Organic, N.O.S.	8	III	Corrosive Sticker

15. Regulatory Information:

U.S. Federal Regulations:

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

SARA 311/312: Immediate (Acute) Health Hazard

Pennsylvania Right to know Components:	**Component**	**CAS#**	**Amount**
	Sodium Hydroxide	1310-73-2	≥ 1.0 - ≤ 1.7%
New Jersey Right to know Components:	**Component**	**CAS#**	**Amount**
	Sodium Hydroxide	1310-73-2	≥ 1.0 - ≤ 1.7%

California Proposition 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm at levels which would require a warning under the statute.

OSHA Hazcom Standard Rating: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CEPA - Domestic Substances List (DSL): All substances contained in this product are listed on the Canadian Domestic Substances list (DSL) or are not required to be listed.

US Toxic Substances Control Act: All components of this product are listed on the TSCA inventory or are exempt from TSCA inventory requirements under 40 CFR 720.30

Canada - WHMIS: Class D2B (Other Toxic effects); Class E (Corrosive to Metal)

CERCLA: Sodium Hydroxide is listed

16. Other Information:

HMIS and NFPA Rating Scale:

HMIS: Hazardous Materials Identification System

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

HMIS Rating:*

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

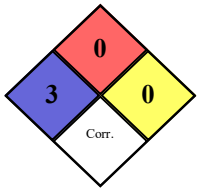
RATING	HEALTH	FIRE HAZARD	PHYSICAL HAZARD
0	No significant risk to health	Will not burn	Product stable under ambient temperature and condition.
1	Can cause irritation or minor reversible	Must be preheated to burn	Product can become unstable at high temperatures and pressures.
2	Can cause temporary or residual injury	Ignites when moderately heated	Product can become unstable and cause violent chemical reaction at normal pressures and temperatures
3	Can cause serious injury	Ignition occurs at normal temperature	Product capable of forming explosive mixtures and is capable of detonation in presence
4	Can be lethal from single or repeated exposure.	Extremely flammable	Product is highly explosive and unstable. Exothermic reactions possible with decomposition, polymerization, reaction with water or self reaction

Personal Protection Code C: Gloves + Safety Goggles + Chemical Apron

NFPA: National Fire Protection Association

Numeric Scale for Health (Blue), Fire Hazard (Red), and Reactivity (Yellow):
Special (White)

NFPA Rating:*



RATING	HEALTH	FIRE HAZARD	REACTIVITY
0	Minimal Hazard	Will not burn	Normally Stable
1	Can cause significant irritation	Must be preheated to burn	Unstable at high temperatures
2	Can cause temporary incapacitation or residual injury	Ignites when moderately heated	Normally unstable. Can readily go under violent chemical reaction but do not detonate.
3	Can cause permanent injury.	Ignition occurs at normal temperature	Capable of detonation, or of explosive reaction, but requires a strong ignition source.
4	Can be lethal.	Extremely flammable	May explode at normal temperatures and pressures

16. Other Information:

Potential Health Effects:

Eye Contact: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Skin Contact: Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause severe response if skin is abraded (scratched or cut). May cause more severe response on covered skin (under clothing, gloves). Mist may cause skin irritation. Not classified as corrosive to the skin according to DOT guidelines.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: Vapors are primarily water; single exposure is not likely to be hazardous. Prolonged excessive exposure to mist may cause serious adverse effects, even death. Mist may cause irritation of upper respiratory tract (nose and throat).

Ingestion: Low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration. Swallowing may result in burns of the mouth and throat.

Aspiration Hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

Effects of Repeated Exposure: For the minor component(s): In animals, effects have been reported on the following organs: Kidney and Urinary tract. Repeated excessive exposure may alter concentrations of metals in the body. In animals, it has been shown to cause deposition of calcium salts in various urinary tract issues.

Birth Defects/Developmental Effects: EDTA and its sodium salts have been reported to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation.

Revision Date: January 20, 2022

Reason for Revision: Revised Section 2 - Acute Toxicity, Oral to reflect Category 4

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