SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Ammonia ULR TNT Reagent Vial
**Catalog Number:** TNT830R

Hach Company
P.O. Box 389
Loveland, CO USA 80539
(970) 669-3050

**Emergency Telephone Numbers:**
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

**MSDS Number:** M02442
**Chemical Name:** Ammonia
**CAS Number:** 7664-41-7
**Additional CAS No. (for hydrated forms):** Not applicable
**Chemical Formula:** NH₃
**Chemical Family:** Nitrogen
**Intended Use:** Laboratory Reagent Determination of ammonium nitrogen

2. HAZARDS IDENTIFICATION

**GHS Classification:**
- **Hazard categories:** Skin Corrosion/Irritation: Skin Corr. 1A

**GHS Label Elements:**
- DANGER

**Hazard statements:** Causes severe skin burns and eye damage. May be corrosive to metals.

**Precautionary statements:** Wear protective gloves / protective clothing / eye protection / face protection. If swallowed: rinse mouth. Do NOT induce vomiting. If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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 or doctor/physician.

**HMIS:**
- **Health:** 1
- **Flammability:** 0
- **Reactivity:** 0

**Protective Equipment:** X - See protective equipment. Section 8.

**NFPA:**
- **Health:** 1
- **Flammability:** 0
- **Reactivity:** 0

**WHMIS Hazard Classification:** Class D. Division 2. Subdivision A - Very toxic materials (other toxic effects)

**WHMIS Symbols:** Other Toxic Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS
**Hazardous Components according to GHS:**

**Sodium Salicylate**

- **CAS Number:** 54-21-7
- **Chemical Formula:** C<sub>7</sub>H<sub>6</sub>O<sub>3</sub>Na
- **GHS Classification:** Acute Tox. Orl 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT Single 3, H335
- **Percent Range (Trade Secret):** 1.0 - 10.0
- **Percent Range Units:** weight / volume
- **PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust
- **TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Other Toxic Effects

**Sodium Hydroxide**

- **CAS Number:** 1310-73-2
- **Chemical Formula:** NaOH
- **GHS Classification:** Met. Corr.1, H290; Skin Corr. 1A, H314; Aquatic Acute 3, H402
- **Percent Range (Trade Secret):** 1.0 - 5.0
- **Percent Range Units:** weight / volume
- **PEL:** 2 mg/m<sup>3</sup>
- **TLV:** Not established

**WHMIS Symbols:** Acute Poison Corrosive

**Hazardous Components according to GHS:** No

**Demineralized Water**

- **CAS Number:** 7732-18-5
- **Chemical Formula:** H<sub>2</sub>O
- **GHS Classification:** Not a dangerous substance according to GHS.
- **Percent Range (Trade Secret):** 80.0 - 90.0
- **Percent Range Units:** volume / volume
- **PEL:** Not established
- **TLV:** Not established

**WHMIS Symbols:** Not applicable

**Sodium Citrate**

- **CAS Number:** 68-04-2
- **Chemical Formula:** C<sub>6</sub>H<sub>5</sub>O<sub>7</sub>Na<sub>3</sub> 2H<sub>2</sub>O
- **GHS Classification:** Not applicable
- **Percent Range (Trade Secret):** 1.0 - 10.0
- **Percent Range Units:** weight / volume
- **PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust
- **TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Not applicable

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**4. FIRST AID MEASURES**

**General Information:** In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

**Advice to doctor:** Treat symptomatically.

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.

**Skin Contact (First Aid):** Wash skin with soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing.

**Inhalation:** Remove to fresh air.

**Ingestion (First Aid):** Do not induce vomiting. Call physician immediately. Never give anything by mouth to an unconscious person.

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**5. FIRE FIGHTING MEASURES**
Flammable Properties: Material will not burn.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: None reported
Hazardous Combustion Products: May emit acidic smoke and fumes.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company’s emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
Containment Technique: Stop spilled material from being released to the environment.
Clean-up Technique: Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker.
Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH.
Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.
Evacuation Procedure: Evacuate as needed to perform spill clean-up.
DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.
Storage: Keep container tightly closed when not in use.
Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:
   Eye Protection: safety glasses with top and side shields
   Skin Protection: disposable latex gloves. In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.
   Inhalation Protection: adequate ventilation
Precautionary Measures:
TLV: Not established
PEL: Not established
For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless
Physical State: Liquid
Molecular Weight: Not applicable
Odor: Odorless
Odor Threshold: Odorless
pH: 13.5
Corrosivity:
   Corrosivity Classification: Classified as corrosive to metals.
   Steel: Not determined
   Aluminum: Not determined
Specific Gravity/ Relative Density (water = 1; air =1): 1.23
Viscosity: Not determined
Solubility:
   Water: Miscible
   Acid: Miscible
Other: Not determined
Partition Coefficient (n-octanol/water): Not applicable
Coefficient of Water/Oil: Not applicable
Melting Point: Not determined
Decomposition Temperature: Not determined
Boiling Point: Not determined
Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: 15 - 20% EPA Definition (Not volatile VOC)
Flammable Properties: Material will not burn.
Flash Point: Not applicable
   Method: Not applicable
Flammability Limits:
   Lower Explosion Limits: Not applicable
   Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Explosive Properties:
   Not classified according to GHS criteria.
Oxidizing Properties:
   Not classified according to GHS criteria.
Reactivity Properties:
   Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.
Gas under Pressure:
   Not classified according to GHS criteria.
   Not determined

10. STABILITY AND REACTIVITY

   Chemical Stability: Stable when stored under proper conditions.
   Mechanical Impact: None reported
   Static Discharge: None reported.
   Reactivity/Incompatibility: Incompatible with: acids iodine iron salts lead acetate oxidizers Silver Nitrate sodium phosphate
   Hazardous Decomposition: Toxic fumes of: carbon monoxide carbon dioxide
   Conditions to Avoid: Extreme temperatures Exposure to light.

11. TOXICOLOGICAL INFORMATION

   Toxicokinetics, Metabolism and Distribution: No information available for mixture.
   Toxicologically Synergistic Products: None reported
   Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data
   ATE Oral Rat LD50 = 10430 mg/kg
   Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
   Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.
   Skin Corrosion/Irritation: Corrosive to skin.
   Eye Damage: Corrosive to eyes.
   Sensitization: Based on classification principles, the classification criteria are not met.
   CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found.
   This product does NOT contain any IARC listed chemicals.
   Not applicable
   This product does NOT contain any NTP listed chemicals.
   Not applicable
   This product does NOT contain any OSHA listed carcinogens.
   Not applicable
   Symptoms/Effects:
**Ingestion:** May cause: irritation of the mouth and esophagus. Very large doses may cause: headache, dizziness, ringing in the ears (tinnitus), blurred vision, confusion, drowsiness, thirst, nausea, vomiting, diarrhea, convulsions, coma.

**Inhalation:** No effects anticipated.

**Skin Absorption:** Will be absorbed through the skin. Effects similar to those of ingestion.

**Chronic Effects:** Salicylates may cause ringing in the ears (tinnitus), abnormal bleeding, gastric ulceration, mental deterioration, skin eruption, temporary vision loss, and other optical effects.

**Medical Conditions Aggravated:** Allergies or sensitivity to aspirin or salicylates.

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**12. ECOLOGICAL INFORMATION**

**Product Ecological Information:** No ecological data available for this product. Mobility in soil: No data available.

**Ingredient Ecological Information:** CEPA statement: Sodium salicylate, tri-Sodium citrate: Not persistent, not bioaccumulative or inherently toxic to aquatic organisms. Sodium hydroxide: Persistent, not bioaccumulative or inherently toxic to aquatic organisms.

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**13. DISPOSAL CONSIDERATIONS**

**EPA Waste ID Number:** D002

**Special Instructions (Disposal):** Working in small batches, dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain.

**Empty Containers:** Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

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**14. TRANSPORT INFORMATION**

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Not Currently Regulated

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**Hazard Class:** NA
**Subsidiary Risk:** NA
**ID Number:** NA
**Packing Group:** NA

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

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**Hazard Class:** NA
**Subsidiary Risk:** NA
**UN Number/PIN:** NA
**Packing Group:** NA

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

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**Hazard Class:** NA
**Subsidiary Risk:** NA
**ID Number:** NA
**Packing Group:** NA

**I.M.O.:**

**Proper Shipping Name:** Not Currently Regulated

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**Hazard Class:** NA
**Subsidiary Risk:** NA
**ID Number:** NA
**Packing Group:** NA

**Additional Information:** There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS
part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:
O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)
E.P.A.:
S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Delayed (Chronic) Health Hazard Immediate (Acute) Health Hazard
S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.
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302 (EHS) TPQ (40 CFR 355): Not applicable
304 CERCLA RQ (40 CFR 302.4): Sodium Hydroxide 1000 lbs.
304 EHS RQ (40 CFR 355): Not applicable
Clean Water Act (40 CFR 116.4): Sodium Hydroxide - RQ = 1000 lbs. (454 kgs.)
RCRA: Contains RCRA regulated substances. See Section 13, EPA Waste ID Number.

State Regulations:
California Prop. 65: No Prop. 65 listed chemicals are present in this product.
Identification of Prop. 65 Ingredient(s): None
California Perchlorate Rule CCR Title 22 Chap 33: Not applicable
Trade Secret Registry: Not applicable

National Inventories:
U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).
CAS Number: Not applicable
Canadian Inventory Status: All ingredients of this product are DSL listed.
EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.
Australian Inventory (AICS) Status: All ingredients are listed.
New Zealand Inventory (NZIoC) Status: All components either listed or exempt.
Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.
Japan (ENCS) Inventory Status: All components either listed or exempt.
China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

Complete Text of Health phrases referred to in Section 3: H314 Causes severe skin burns and eye damage. H320 May be corrosive to metals.
Revision Summary: Substantial revision to comply with EU Reg 1272/2008. Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).
Date of MSDS Preparation:
Day: 18
Month: February
Year: 2014
MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350
CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).
Legend:

NA - Not Applicable  w/w - weight/weight
ND - Not Determined  w/v - weight/volume
NV - Not Available   v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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