1. IDENTIFICATION

Product name: 4-Nitrotoluene-2-sulfonic Acid Hydrate
Product code: N0277
Product use: For laboratory research purposes.
Restrictions on use: Not for drug or household use.

Company:
TCI America
9211 N. Harborgate Street
Portland, OR 97203 U.S.A.
Telephone:
+1-800-423-8616 / +1-503-283-1681
Fax:
+1-888-520-1075 / +1-503-283-1987
e-mail:
sales-US@TCIchemicals.com
www.TCIchemicals.com

Emergency telephone number:
Chemical Emergencies:
TCI America (8:00am - 5:00pm) PST
+1-503-286-7624
Transportation Emergencies:
Chemtrec 24-Hour
+1-800-424-9300 (U.S.A.)
+1-703-527-3887 (International)

Responsible department:
TCI America
Environmental Health Safety and Security
+1- 503-286-7624

2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200:
Eye Damage/Irritation [Category 1]
WHMIS 2015:
Corrosive to Metals [Category 1]
Skin Corrosion/Irritation [Category 1C]

Signal word:
Danger!

Hazard Statement(s):
May be corrosive to metals
Causes severe skin burns and eye damage

Pictogram(s) or Symbol(s):

Precautionary Statement(s):
[Prevention]
Keep only in original container. Do not breathe dusts or mists. Wash hands and face thoroughly after handling. Wear protective gloves, protective clothing, face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a poison center or doctor. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor. 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. Absorb spillage to prevent material damage.

[Response]

[Storage]

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations (e.g. US: 40 CFR Part 261, EU:91/156/EEC, JP: Waste Disposal and Cleaning Act, etc.).

Hazards not otherwise classified:
[HNOC]

May be harmful if swallowed.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance/mixture:</th>
<th>Substance</th>
</tr>
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<tbody>
<tr>
<td>Components:</td>
<td>4-Nitrotoluene-2-sulfonic Acid Hydrate</td>
</tr>
<tr>
<td>Percent:</td>
<td>&gt;95.0%(T)</td>
</tr>
<tr>
<td>CAS RN:</td>
<td>121-03-9</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>217.20(Anh)</td>
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<tr>
<td>Chemical Formula:</td>
<td>C₇H₇NO₅S・xH₂O</td>
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4. FIRST-AID MEASURES

Description of first aid measures

- **Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- **Skin contact:** Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
- **Eye contact:** 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.
- **Ingestion:** Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.

Symptoms/effects:

- **Acute:** Pain. Redness.
- **Delayed:** No data available

Indication of any immediate medical attention: Not available.

Notes to physician: No data available

5. FIRE-FIGHTING MEASURES

- **Suitable extinguishing media:** Dry chemical, foam, water spray, carbon dioxide.
- **Specific hazards arising from the chemical:** Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
- **Hazardous combustion products:** These products include: Carbon oxides Nitrogen oxides Sulfur oxides
- **Other specific hazards:** Closed containers may explode from heat of a fire.

Advice for firefighters: Wear self-contained breathing apparatus if possible.

6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc. Prevent product from entering drains. Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

- **Precautions for safe handling:** Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated. Avoid contact with skin, eyes and clothing. Use corrosive resistant equipment.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage conditions:** Keep container tightly closed. Store in a cool and dark place. Store locked up. Store away from incompatible materials such as oxidizing agents.
  - **Packaging material:** Comply with laws. Keep only in original container.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls: Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection: Dust respirator, self-contained breathing apparatus (SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection: Impervious gloves.

Eye protection: Safety goggles. A face-shield, if the situation requires.

Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Solid
Form: Crystal - Powder
Colour: White - Deep yellow red
Odour: No data available
Odor threshold: No data available
Odour threshold: No data available

Melting point/freezing point: 135°C (275°F)
Boiling point/range: No data available
Decomposition temperature: No data available
Relative density: No data available
Kinematic viscosity: No data available
Log Pow: No data available

pH: No data available
Vapour pressure: No data available
Vapour density: No data available
Dynamic Viscosity: No data available
Evaporation rate (Butyl Acetate=1): No data available

Flash point: No data available
Flammability (solid, gas): No data available
Autoignition temperature: No data available
Flammability or explosive limits:
Lower: No data available
Upper: No data available

Solubility(ies):
- [Water] Soluble
- [Other solvents] Soluble

Soluble: Ether, Alcohols, Chloroform

10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical stability: Stable under proper conditions.
Possibility of hazardous reactions: No special reactivity has been reported.
Incompatible materials: Oxidizing agents
Hazardous decomposition products: Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx), Sulfur oxides
11. TOXICOLOGICAL INFORMATION

RTECS Number: DB7175000

Acute Toxicity:
ori-rat LD50:3710 mg/kg

Skin corrosion/irritation:
skn-rbt 20 mg/24H MOD

Serious eye damage/irritation:
eye-rbt 2 mg/24H SEV

Respiratory or skin sensitization:
No data available

Germ cell mutagenicity:
No data available

Carcinogenicity:
No data available

Target organ(s):
No data available

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<th>OSHA: No data available</th>
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Reproductive toxicity:
No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity:
Fish:
48h LC50:326 mg/L (Oryzias latipes)
96h LC50:>100 mg/L (Oryzias latipes)

Crustacea:
48h EC50:130 mg/L (Daphnia magna)

Algae:
72h EC50:90 mg/L (Selenastrum capricornutum)

Persistence / degradability:
3 % (by BOD), 0 % (by HPLC), 0 % (by TOC)

Bioaccumulative potential (BCF):
<0.4 (conc. 0.5 mg/L), <4.1 (conc. 0.05 mg/L)

Mobility in soil

Log Pow: No data available

Soil adsorption (Koc): No data available

Henry’s Law (PaM^3/mol): No data available

13. DISPOSAL CONSIDERATIONS

Disposal of product:
Recycle to process if possible. It is the generator’s responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, waterways, or the soil.

Disposal of container:
Dispose of as unused product. Do not re-use empty containers.

Other considerations:
Observe all federal, state and local regulations when disposing of the substance.
14. TRANSPORT INFORMATION

DOT (US)

<table>
<thead>
<tr>
<th>UN number</th>
<th>Proper Shipping Name</th>
<th>Class or Division</th>
<th>Packing Group</th>
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<tr>
<td>UN3261</td>
<td>Corrosive solid, acidic, organic, n.o.s</td>
<td>8 Corrosive material</td>
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IATA

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IMDG

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EmS number: F-A, S-B

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.): This product is on the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations

CERCLA Hazardous substance and Reportable Quantity:
- SARA 313: Not Listed
- SARA 302: Not Listed

State Regulations

State Right-to-Know
- Massachusetts: Not Listed
- New Jersey: Not Listed
- Pennsylvania: Not Listed

California Proposition 65: Not Listed

Other Information

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International Inventories

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<td>EC-No:</td>
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16. OTHER INFORMATION

Revision date: 07/06/2018
Revision number:

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.