Hydrazine Dihydrochloride
Safety Data Sheet

1. Product and Company

Product name: Hydrazine Dihydrochloride
Synonym: Hydrazine Bihydrcloride
CAS-No.: 5341-61-7
Company: Hummel Croton Inc.
10 Harmich Rd.
South Plainfield, NJ 07080
Telephone: 908-754-1800
Fax: 908-754-1815

Emergency telephone number
Emergency Phone #: Chemtrec US: 800-424-9300
ChemTel International: +1-813-248-0585

2. Hazards

GHS Label elements

GHS Classification: Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Skin sensitisation (Category 1), H317
Carcinogenicity (Category 1B), H350
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

Pictogram(s)

HMIS Rating

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>0</td>
<td>1</td>
<td>E</td>
</tr>
</tbody>
</table>
Signal word: **DANGER**

**Hazard statement(s)**

H301 + H311 + H331  Toxic if swallowed, in contact with skin or if inhaled
H317  May cause an allergic skin reaction.
H350  May cause cancer.
H410  Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s)**

P201  Obtain special instructions before use.
P202  Do not handle until all safety precautions have been read and understood.
P261  Avoid breathing dust/ fume/ gas/ mist/ vapors/spray.
P264  Wash skin thoroughly after handling.
P270  Do not eat, drink or smoke when using this product.
P271  Use only outdoors or in a well-ventilated area.
P272  Contaminated work clothing should not be allowed out of the workplace.
P273  Avoid release to the environment.
P280  Wear protective gloves/ protective clothing.
P301 + P310  IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P302 + P352  IF ON SKIN: Wash with plenty of soap and water.
P304 + P340  IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313  IF exposed or concerned: Get medical advice/ attention.
P322  Specific measures (see supplemental first aid instructions on this label).
P330  Rinse mouth.
P333 + P313  If skin irritation or rash occurs: Get medical advice/ attention.
P361  Remove/Take off immediately all contaminated clothing.
P363  Wash contaminated clothing before reuse.
P391  Collect spillage.
P403 + P233  Store in a well-ventilated place. Keep container tightly closed.
P501  Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS

None.

3. Composition/Ingredients

<table>
<thead>
<tr>
<th>Substance</th>
<th>Formula</th>
<th>Molecular weight</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrazine Dihydrochloride</td>
<td>H₄N₂•2HCl</td>
<td>104.97 g/mol</td>
<td>5341-61-7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS</th>
<th>%</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrazine Dihydrochloride</td>
<td>5341-61-7</td>
<td>97-100%</td>
<td>0.1 mg/m³ Skin as Hydrazine</td>
<td>0.013 mg/m³ Skin as Hydrazine</td>
</tr>
</tbody>
</table>
4. First Aid

**First Aid For Eye:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**First Aid For Skin:** In case of contact, flush skin with water. Wash clothing before reuse. Call a physician if irritation occurs.

**First Aid For Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**First Aid For Ingestion:** If swallowed, call a physician immediately.

5. Fire Data

- Flammability: Non-Flammable
- Flash Point: Not Applicable
- Auto Ignition: Not Applicable
- Flammable Limits: Not Applicable

**Extinguishing Media:** Water, carbon dioxide, foam.

**Fire Fighting Procedure:** In case of fire, wear NIOSH approved self-contained breathing apparatus (SCBA) with full-face piece, operated in the positive pressure mode. Wear full protective clothing.

**Fire/Explosion Hazards:** Move container from the fire area, if possible. Cool fire exposed containers with water well after the fire is out. For massive fire in a storage area use an unmanned hose holder. Flooding is best technique.

6. Accidental Release

**Spill Or Leak Procedures:** Utilize recommended protective clothing and equipment. Clean spills in a manner that does not disperse dust into the air. Spill area can be washed with water. Collect wash water for approved disposal. Keep from entering water or ground water.

7. Handling And Storage

- **Storage Temperatures:** Store at ambient temperature
- **Shelf Life:** Unlimited in tightly sealed container
- **Special Sensitivity:** None.

**Handling/Storage Precautions:** Avoid breathing dust. Avoid getting in eyes or on skin. Wash thoroughly after handling. Store in a dry place away from direct sunlight, heat and incompatible materials. Reseal containers immediately after use. Store away from food and beverages.

8. Exposure Controls/Personal Protection

- **Eye Protection:** Safety glasses or goggles.
- **Skin Protection:** PVC gloves with impervious boots, apron or coveralls. Wash hands and face before eating, drinking or using tobacco.
- **Respirator:** Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a NIOSH/MSHA approved dust respirator must be worn.
- **Ventilation:** Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.
Additional Measures: Emergency showers and eye wash stations should be available. Educate and train employees in the safe handling of hazardous chemicals.

9. Physical And Chemical Properties

   Physical Form: Crystalline Solid
   Color: White
   Odor: Odorless
   Molecular Weight: 104.97 g/mol
   Boiling Point: Decomposes 240°C
   Melting/Freezing Point: 198°C
   Solubility In Water: Soluble
   Specific Gravity: 1.42

10. Stability And Reactivity

   Stability: Stable.
   Hazardous Polymerization: Will not occur.
   Incompatibilities: Oxidizing agents and bases.
   Instable Conditions: Excessive temperatures (see incompatibilities).
   Decomposition Temperature: Above 240°C
   Decomposition Products: Nitrogen oxides, hydrogen chloride gas.

11. Toxicological Information

   RTECS Number: MV2298000
   Routes of Exposure: Eye contact. Ingestion. Inhalation. Skin contact.
   Toxicity Data: This material has not been fully tested
   Chronic Toxic Effects: Carcinogen. May alter genetic material
   Acute Toxic Effects: May be fatal if inhaled, swallowed, or absorbed through skin. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, and shortness of breath, headache, nausea and vomiting. May cause allergic reaction. Can cause CNS depression. May cause convulsions.

12. Ecological Information

   Ecotoxicity: Not available at this time.

13. Disposal Considerations

   Waste Disposal Method: Waste disposal should be in accordance with existing federal, state and local environmental regulations.

14. Transportation Information

   Proper Shipping Name: Corrosive Solid, Acidic, Inorganic, N.O.S. (Hydrazine Dihydrochloride)
   UN Number: 2923
Class: 8
P.G.: III
Label Code: 8
Reportable Quantity: RQ 1 (.454)

15. Regulatory Information

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
TSCA Chemical Inventory: This compound is on the EPA Toxic Substance Control Act (TSCA) Inventory List
California Proposition 65: To the best of our knowledge, this product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive effects.
SARA 313 Title III:
   - Section 320 Extremely Hazardous Substances: None
   - Section 311/312 Hazardous Categories: None
   - Section 313 Toxic Chemicals: This product may be subject to SARA section 313 reporting requirements.

16. Other Information

Prepared By: Michael Richard
Date: March 21, 2018
Reason For Issue: Emergency Contact Update

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