



Hummel Croton Inc.  
10 Harmich Rd.  
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In Case Of Emergency Call Chemtrec®  
(U.S.) (800) 424-9300  
(International) (703) 527-3887

## Hydrazine Hydrate (85%) Safety Data Sheet

### 1. Product and Company

Product name: Hydrazine Hydrate (85% Solution)  
Synonym: 54.5% Hydrazine Solution  
CAS-No.: 302-01-2  
Company: Hummel Croton Inc.  
10 Harmich Rd.  
South Plainfield, NJ 07080  
Telephone: 908-754-1800  
Fax: 908-754-1815

HMIS Rating	
Health	3
Flammability	2
Reactivity	2
Personal Protection	X

Emergency telephone number

Emergency Phone #: Chemtrec US: 800-424-9300  
Chemtrec International: 703-527-3887

### 2. Hazards

#### GHS Label elements

GHS Classification: Flammable liquids (Category 4), H227  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 3), H331  
Acute toxicity, Dermal (Category 3), H311  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
Skin sensitisation (Category 1), H317  
Carcinogenicity (Category 1B), H350  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

Pictogram(s)



Signal word **DANGER**

Hazard statement(s)

- H227 Combustible liquid.
- H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- 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.
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- 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/ eye protection/ face protection.
- P281 Use personal protective equipment as required.
- P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338 + P310 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.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P363 Wash contaminated clothing before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- P391 Collect spillage.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
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

Substance  
Formula:  $\text{H}_4\text{N}_2$   
CAS-No.: 302-01-2

Material	CAS	%	OSHA	ACGIH
Hydrazine	5341-61-7	54.5%	0.1 mg/m <sup>3</sup> Skin	0.013 mg/m <sup>3</sup> Skin
Water	7732-18-5	45.5%	Not Established	Not Established

### 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: Yes

Flash Points: 74-93°C (Cleveland CC)

Auto-Ignition: Not Applicable

Flammable Limits: Lower: 4.7% in air @ 1000mbar Upper: 100% in air @ 1000mbar

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: Collect wash water for approved disposal. Keep from entering water or ground water. Utilize recommended protective clothing and equipment. Clean spills in a manner that does not disperse liquid into the air. Isolate area of spill by diking. Transfer contents to a non-leaking container or storage vessel. Neutralize spilled hydrazine by diluting with water to a 5% or less solution. Add an equal volume of 5% calcium hypochlorite aqueous solution. Test for neutralization. After neutralization, transfer material to appropriate DOT container for proper 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: Liquid

Color: Colorless to Slight Amber

Odor: Slight Characteristic Odor

Molecular Weight: 32.05 g/mol as Hydrazine

Boiling Point: 119°C

Melting/Freezing Point: -56°C

Solubility In Water: Completely Soluble

Specific Gravity: 1.03 @ 15°C

## 10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will Not occur

Incompatibilities: Strong Acid & Strong Oxidizers Barium Oxide, Calcium Oxide, Chromate Salts, Alkali Metals And Metal Salts.

Instable Conditions: Excessive temperatures (see Incompatibilities).

Decomposition Temperature: Not Determined

Decomposition products: Nitrogen products and in some cases hydrogen, an explosive gas.

## 11. Toxicological Information

RTECS Number: MV8050000

Routes of Exposure: Eye contact. Ingestion. Inhalation. Skin contact.

Toxicity Data: Orl-Rat LD50: 129 mg/kg Orl-Mus LD50: 83 mg/kg Ipr-Mus LD50: 156 mg/kg

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: Hydrazine aqueous solution with more than 37% hydrazine by mass

UN Number: 2030

Class: 8

P.G.: II

Label Code: 8(6.1)

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: June 3, 2015

Reason For Issue: GHS Compliance

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