

MSDS

2,4-DINITROPHENYLHYDRAZINE SOLUTION

Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Catalog Number: R2574000	
Product Identity: 2,4-DINITROPHENYLHYDRAZINE SOLUTION	
Manufacturer's Name: RICCA CHEMICAL COMPANY LLC	Emergency Contact(24 hr) -- CHEMTREC® Domestic: 800-424-9300 International: 703-527-3887
CAGE Code: 4TCW6, 0V553, 4XZQ2	
Address: 448 West Fork Dr Arlington, TX 76012	Telephone Number For Information: 817-461-5601
Date Prepared: 10/3/06	Revision: 1 Last Revised: 05/20/2011 Date Printed: 03/13/2012 8:31:08 am

Section 2. Composition/Information on Ingredients

Component	CAS Registry #	Concentration	ACGIH TLV	OSHA PEL
2,4-Dinitrophenylhydrazine	119-26-6	0.1 - 0.2%	Not Available	Not Available
			Not Available	Not Available
Methanol (Methyl Alcohol)	67-56-1	45 - 47%	200 ppm	200 ppm
			262 mg/m3	260 mg/m3
Hydrochloric Acid	7647-01-0	3.5 - 4.5%	C 5 ppm	C 5 ppm
			C 7.5 mg/m3	C 7 mg/m3
Water, Deionized	7732-18-5	Balance	Not Available	Not Available
			Not Available	Not Available

Section 3: Hazard Identification

Emergency Overview: DANGER! Dried product residues may present a fire and explosion hazard. Do not open bottle if any crystalline residue is present around the cap. Add water to stabilize the 2,4-Dinitrophenylhydrazine.

DANGER! Flammable and mildly corrosive. Keep away from heat, sparks and open flames. Keep container closed. Use with adequate ventilation. Harmful if ingested, inhaled, or absorbed through skin. If ingested, dilute with water and call a physician. Wash areas of contact with plenty of water. For eyes, get medical attention.

Target Organs: eyes, skin, respiratory system, central nervous system, liver, pancreas, blood.

Eye Contact: Eye contact causes tissue damage and blindness.

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Inhalation: May cause irritation of the eyes, nose, throat, upper respiratory tract and associated mucosa. Central nervous system effects include headache, nervousness, tremors, acidosis, convulsions, dizziness, tearing, fatigue, nausea, somnolence, narcosis with stupor and loss of consciousness, circulatory collapse, respiratory failure and death.

Skin Contact: Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

Ingestion: Affects the brain, lungs, kidneys, gastrointestinal tract, eyes and respiratory system and can cause coma, blindness and death.

Chronic Effects/Carcinogenicity: None

IARC - Hydrochloric Acid is unclassifiable as to carcinogenicity to humans. Hydrochloric Acid is unclassifiable as to carcinogenicity to humans.

NTP - No.

OSHA - No.

Reproductive Information: Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for Hydrochloric Acid. Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for Methanol (Methyl Alcohol). Reproductive effects cited in 'Registry of Toxic Effects

Teratology (Birth Defect) Information: Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for 2,4-Dinitrophenylhydrazine.

Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Hydrochloric Acid. Mutation data cited in 'Registry of Toxic Effects of

Section 4: First Aid Measures - In all cases, seek qualified evaluation.

Eye Contact: Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Skin Contact: Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops.

Ingestion: Do not induce vomiting. Give large quantity of water. Call a physician immediately.

Section 5: Fire Fighting Measures

Flash Point: Approximately 24°C

Method Used: CC

LFL: Not Available.

UFL: Not Available.

Extinguishing Media: Dry chemical, foam, or carbon dioxide. Reacts with water producing heat and toxic fumes.

Fire & Explosion Hazards: Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks and open flames. Sensitive to static discharge. Contact with most metals causes formation of flammable and explosive hydrogen gas.

Fire Fighting Instructions: Vapors can flow along surfaces to distant ignition source and flash back. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

Fire Fighting Equipment: Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

Section 7. Handling and Storage

Dried product residues may present a fire and explosion hazard. Do not open bottle if any crystalline residue is present around the cap. Add water to stabilize the 2,4-Dinitrophenylhydrazine. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

Safety Storage Code: Flammable

Section 8: Exposure Control/Personal Protection

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved atmosphere supplied respirator must be worn.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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Section 9: Physical and Chemical Properties

Appearance: Clear, red liquid
Odor: characteristic alcohol
Solubility in Water: Infinite
Specific Gravity: Approximately 0.9

pH: Not Available.
Boiling Point(°C): NA
Melting Point(°C): NA
Vapor Pressure: Not Applicable.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage. Very unstable if allowed to dry completely.
Incompatibility: Strong oxidizers, most metals, heat, sparks, open flame. Will attack some forms of plastics, rubber and coatings. May react with metallic aluminum and generate hydrogen gas.
Hazardous Decomposition Products: Acrid and irritating fumes, including toxic Formaldehyde and oxides of Carbon, when heated to decomposition.
Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

LD50, Oral, Rat: (Methanol) 5628 mg/kg; LD50, Oral, Rabbit (Hydrochloric Acid) 900 mg/kg; details of toxic effects not reported other than lethal dose value. LD, Oral, Rat: (2,4-Dinitrophenylhydrazine) > 500 mg/kg, Details of toxic effects not reported other than lethal dose value.

Section 12. Ecological Information

Ecotoxicological Information: Methanol has slight acute and chronic toxicity to aquatic life. Hydrogen Chloride has slight acute and chronic toxicity to aquatic life.

Chemical Fate Information: Methanol is slightly persistent in water, with a half-life of between 2 to 20 days. Small quantities of acids will be neutralized by the alkalinity in aquatic ecosystems. Virtually 100% of Hydrogen Chloride will eventually end up in the air.

Section 13. Disposal Considerations

Absorb with suitable inert material (vermiculite, dry sand, earth) and place in a chemical waste container for proper disposal in an approved waste disposal facility for incineration in a chemical incinerator equipped with scrubber and afterburner. Ventilate area of spill. Have extinguishing agent available in case of fire. Eliminate all sources of ignition. Use non-sparking tools and equipment. Always dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

Part Numbers: R2574000-120B

D.O.T. Shipping Name: Flammable Liquid, Corrosive, n.o.s., (Methanol, Hydrochloric Acid)

D.O.T. Hazard Class: 3 (8)

U.N. / N.A. Number: UN2924

Packing Group: III

D.O.T. Label: 3, 8



Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)

OSHA Status: These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

TSCA Status: All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

Sara Title III:

Section 302 Extremely Hazardous Substances: Not Applicable.

Section 311/312 Hazardous Categories: Acute, Chronic, Fire: Yes; Pressure, Reactivity: No

Section 313 Toxic Chemicals: Not Applicable.

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California: None Reported.

Pennsylvania: Hydrochloric Acid is listed as an Environmental Hazard on the state's Hazardous Substances List. Methanol (Methyl Alcohol) is listed as an Environmental Hazard on the state's Hazardous Substances List. Hydrochloric Acid is listed as an Environmental Hazard on the state's Hazardous Substances List. Methanol (Methyl Alcohol) is listed as an Environmental Hazard on the state's Hazardous Substances List.

RCRA Status: U154,U154

CERCLA Reportable Quantity: Hydrochloric Acid - 5,000 pounds. Methanol (Methyl Alcohol) - 5,000 pounds. Hydrochloric Acid - 5,000 pounds. Methanol (Methyl Alcohol) - 5,000 pounds.

WHMIS: B-2: Flammable and Combustible Material. Flammable Liquid. E: Corrosive Material.



Section 16. Other Information

NFPA Ratings:

Health: 2

Flammability: 2

Reactivity: 0

Special Notice Key:None

HMIS Ratings:

Health: 2

Flammability: 2

Reactivity: 0

Protective Equipment:B (Protective Eyewear, Gloves)

Rev 1, 05-20-2011: (Section 8) revised respiratory protection to include atmosphere supplied respirator if necessary.

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.