



TCI AMERICA

SAFETY DATA SHEET

Revision number: 1
Revision date: 07/06/2018

1. IDENTIFICATION

Product name: Hydrazine Monohydrate
Product code: H0172

Product use: For laboratory research purposes.
Restrictions on use: Not for drug or household use.

Company:
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Responsible department:
TCI America
Environmental Health Safety and Security
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2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200: Acute Toxicity - Oral [Category 3]
WHMIS 2015: Eye Damage/Irritation [Category 1]
Sensitization - Skin [Category 1]
Germ Cell Mutagenicity [Category 2]
Carcinogenicity [Category 2]
Specific Target Organ Toxicity (Single Exposure) [Category 1]
Specific Target Organ Toxicity (Repeated Exposure) [Category 1]
Flammable Liquids [Category 4]
Aquatic Hazard (Acute) [Category 1]
Aquatic Hazard (Long-Term) [Category 1]
Skin Corrosion/Irritation [Category 1B]

Signal word: Danger!

Hazard Statement(s): Combustible liquid
Toxic if swallowed
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects
Causes damage to: Liver Kidney Central Nervous System
Causes damage to organs through prolonged or repeated exposure: Liver Digestive Tract Nervous System Kidney

Pictogram(s) or Symbol(s):



Precautionary Statement(s):
[Prevention]

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from flames and hot surfaces. – No smoking. Do not breathe mist, vapors or spray. Avoid release to the environment. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wash hands and face thoroughly after handling. Wear protective gloves, protective clothing, face protection.

[Response]

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

[Storage]
[Disposal]

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. If exposed: Call a poison center or doctor. Collect spillage.

Store in a well-ventilated place. Keep cool. Store locked up.

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: None.
[HNOC]

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	Hydrazine Monohydrate
Percent:	>98.0%(T)
CAS RN:	7803-57-8
Molecular Weight:	32.05(Anh)
Chemical Formula:	H ₄ N ₂ · H ₂ O

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:	May cause heritable genetic damage in humans. May cause skin sensitization. Possibly carcinogenic to humans.

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 in large amounts, carbon dioxide.
Specific hazards arising from the chemical:	Explosion risk in case of fire. Fight fire remotely due to the risk of explosion.
Hazardous combustion products:	These products include: Nitrogen oxides
Other specific hazards:	Closed containers may explode from heat of a fire.
Advice for firefighters:	Wear self-contained breathing apparatus if possible. Combat fire from a sheltered position.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.
Methods and materials for containment and cleaning up:	Absorb spilled material in a suitable absorbent (e.g. rag, dry sand, earth, saw-dust). In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
Prevention of secondary hazards:	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Precautions for safe handling:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from flames and hot surfaces. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid all contact!
Conditions for safe storage, including any incompatibilities	
Storage conditions:	Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up. Be sure not to give the container unexpected impacts, such as falling down or falling off. Store away from incompatible materials such as oxidizing agents.
Packaging material:	Comply with laws.

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:	Half or full facepiece 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):	Liquid		
Form:	Clear		
Colour:	Colorless		
Odour:	Slight Ammoniacal		
Odor threshold:	No data available		
Odour threshold:	No data available		
Melting point/freezing point:	-52°C (-62°F)	pH:	No data available
Boiling point/range:	119°C (246°F)	Vapour pressure:	No data available.
Decomposition temperature:	No data available	Vapour density:	>1
Relative density:	1.03	Dynamic Viscosity:	No data available
Kinematic viscosity:	No data available	Evaporation rate(Butyl Acetate=1):	No data available
Log Pow:	No data available	Autoignition temperature:	No data available
Flash point:	75°C (167°F)	Flammability or explosive limits:	
Flammability(solid, gas):	No data available	Lower:	No data available
		Upper:	No data available
Solubility(ies):			
[Water]	Miscible		
[Other solvents]			
Miscible:	Alcohols		
Insoluble:	Ether, Chloroform		

10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical stability:	Stable under proper conditions.
Possibility of hazardous reactions:	May explosively decompose on heating, shock, friction, etc.
Conditions to avoid:	Heat, Open flame, Shock, Friction
Incompatible materials:	Oxidizing agents, Acids, Heavy metals, Metal oxides
Hazardous decomposition products:	Carbon monoxide, carbon dioxide etc

11. TOXICOLOGICAL INFORMATION

RTECS Number: MV8050000

Acute Toxicity:

ipr-mus LD50:156 mg/kg
orl-rat LD50:129 mg/kg

orl-mus LD50:83 mg/kg
orl-rbt LD50:55 mg/kg

Skin corrosion/irritation:

No data available

Serious eye damage/irritation:

No data available

Respiratory or skin sensitization:

No data available

Germ cell mutagenicity:

mno-sat 10 umol/plate (+S9)

mno-sat 800 ug/plate (-S9)

Carcinogenicity:

skn-mus TDLo:80 g/kg/43W-I

IARC: No data available

NTP: No data available

OSHA: No data available

Reproductive toxicity:

ihl-rat TCLo:10 ug/m³/5H (8W male)

orl-rat TDLo:3240 ug/kg (24W pre)

Target organ(s):

Causes damage to: Liver Kidney Central Nervous System

Causes damage to organs through prolonged or repeated exposure: Liver Digestive Tract Nervous System Kidney

12. ECOLOGICAL INFORMATION**Ecotoxicity:**

Fish: 96h LC50:1.4 mg/L (Oryzias latipes)
Crustacea: 48h EC50:0.30 mg/L (Daphnia magna)
Algae: 72h EC50:0.19 mg/L (Selenastrum capricornutum)

Persistence / degradability:

2 % (by BOD) , 0% (by IC)

Bioaccumulative potential(BCF):

No data available

Mobility in soil

Log Pow: No data available

Soil adsorption (Koc): No data available

Henry's Law (PaM³/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, water ways, 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)**

UN number: UN2030	Proper Shipping Name: Hydrazine aqueous solution	Class or Division: 8 Corrosive material	Subrisk(s): 6.1 Toxic material.	Packing Group: II
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IATA

UN number: UN2030	Proper Shipping Name: Hydrazine, aqueous solution	Class or Division: 8 Corrosive material	Subrisk(s): 6.1 Toxic material.	Packing Group: II
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IMDG

UN number: UN 2030 numb er:	Proper Shipping Name: Hydrazine, aqueous solution	Class or Division: 8 Corrosive material	Subrisk(s): 6.1 Toxic material.	Packing Group: II
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Air Transport:	Cargo Aircraft Only.
EmS number:	F-A, S-B
Reportable Quantity:	1 Pound (0.454 Kilograms)

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	Listed
Pennsylvania	Not Listed

California Proposition 65:	Not Listed
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Other Information**NFPA Rating:**

Health:	4
Flammability:	2
Instability:	0

HMIS Classification:

Health:	4
Flammability:	2
Physical:	0

International Inventories**16. OTHER INFORMATION**

Revision date: 07/06/2018

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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.