

Hydrazine Dihydrochloride 5341-61-7 MSDS

Section 1 - Chemical Product

MSDS Name: Hydrazine dihydrochloride Material Safety Data Sheet

Synonym: Diamine hydrochloride; Hydrazine dichloride, Hydrazinium chloride

Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content
5341-61-7	Hydrazine dihydrochloride	>98

Hazard Symbols: T N

Risk Phrases: 23/24/25 43 45 50/53

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Toxic by inhalation, in contact with skin and if swallowed. May cause sensitization by skin contact.

May cause cancer. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation. May be absorbed through the skin in harmful amounts. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation:

May cause respiratory tract irritation.

Chronic:

May cause liver and kidney damage.

Section 4 - FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Risk of explosion in the event of decomposition.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. May form flammable dust-air mixtures.

Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 5341-61-7: Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Color: colorless to white

Odor: none reported

pH: Not available.

Vapor Pressure: Negligible.

Viscosity: Not available.

Boiling Point: 392 deg F

Freezing/Melting Point: 388 deg F

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: 392 deg F

Solubility in water: Moderately soluble in water.

Specific Gravity/Density: 1.42 (water=1)

Molecular Formula: $\text{Cl}_2\text{H}_6\text{N}_2$

Molecular Weight: 104.9614

Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable. However, may decompose if heated.

Conditions to Avoid:

Incompatible materials, temperatures above 200°C.

Incompatibilities with Other Materials:

Oxidizing agents.

Hazardous Decomposition Products:

Hydrogen chloride, oxides of nitrogen.

Hazardous Polymerization: Has not been reported.

Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 5341-61-7: MV2298000 LD50/LC50:

Not available.

Carcinogenicity:

Hydrazine dihydrochloride - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

Section 12 - ECOLOGICAL INFORMATION

Other No information available.

Section 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: TOXIC SOLID, INORGANIC, N.O.S.*

Hazard Class: 6.1

UN Number: 3288

Packing Group: III

IMO

Shipping Name: TOXIC SOLID, INORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: 3288

Packing Group: III

RID/ADR

Shipping Name: TOXIC SOLID, INORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: 3288

Packing group: III

Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T N

Risk Phrases:

R 45 May cause cancer.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 43 May cause sensitization by skin contact.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 53 Avoid exposure - obtain special instructions before use.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 5341-61-7: No information available.

Canada

CAS# 5341-61-7 is listed on Canada's DSL List.

CAS# 5341-61-7 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 5341-61-7 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

N/A