

**1 Identification****Product identifier****Product name:** Hydrazine Dihydrochloride**CAS Number:**

5341-61-7

**EC number:**

226-283-2

**Index number:**

007-014-00-6

**Relevant identified uses of the substance or mixture and uses advised against.****Identified use:** SU24 Scientific research and development**Details of the supplier of the safety data sheet****Supplier:**Charkit Chemical Corporation  
32 Haviland Street  
South Norwalk, CT 06854 USA  
Tel: 1-203-299-3220  
Fax: 1-203-299-1355  
Email: sales@charkit.com**Emergency telephone number:**

Chemtrec: 1-800-424-9300, Intl: 1-703-527-3887

**2 Hazard(s) identification****Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS06 Skull and crossbones

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.



GHS08 Health hazard

H350 May cause cancer.



GHS07

H317 May cause an allergic skin reaction.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

T; Toxic

R45-23/24/25: May cause cancer. Toxic by inhalation, in contact with skin and if swallowed.



Xi; Sensitizing

R43: May cause sensitization by skin contact.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Information concerning particular hazards for human and environment:** Not applicable**Hazards not otherwise classified** No information known.**Label elements****Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labeled according to the CLP regulation.

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## Hazard pictograms



GHS06

GHS08

Signal word Danger

## Hazard statements

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H317 May cause an allergic skin reaction.

H350 May cause cancer.

## Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P361 Remove/Take off immediately all contaminated clothing.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects D2A

- Very toxic material causing other toxic effects



## Classification system

## HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	2
FIRE	1
REACTIVITY	1

Health (acute effects) = 2

Flammability = 1

Physical Hazard = 1

## Other hazards

## Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

## 3 Composition/information on ingredients

## Chemical characterization: Substances

## CAS# Description:

5341-61-7 Hydrazine dihydrochloride

## Identification number(s):

EC number: 226-283-2

Index number: 007-014-00-6

## 4 First-aid measures

## Description of first aid measures

## General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

## After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

## After skin contact

Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.

## After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Do not induce vomiting; immediately call for medical help.

## Information for doctor

Most important symptoms and effects, both acute and delayed

No further relevant information available.

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**Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

**Extinguishing media****Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released: Nitrogen oxides (NOx)

Hydrogen chloride (HCl)

**Advice for firefighters****Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

**Environmental precautions:**

Do not allow product to reach sewage system or any water course. Do not allow to penetrate the ground/soil.

**Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

**Prevention of secondary hazards:** No special measures required.**Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment. See

Section 13 for disposal information.

## 7 Handling and storage

**Handling****Precautions for safe handling**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

**Information about protection against explosions and fires:** No information known.**Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Store away from oxidizing agents. **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Control parameters****Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** No data**Exposure controls****Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

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Wash hands before breaks and at the end of work. Store protective clothing separately.  
Avoid contact with the eyes and skin.  
Maintain an ergonomically appropriate working environment.

**Breathing equipment:**

Use self-contained respiratory protective device in emergency situations.

**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

**Eye protection:** Safety glasses**Body protection:** Protective work clothing.**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Crystalline or lump
<b>Color:</b>	White
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

<b>pH-value:</b>	Not applicable.
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**Change in condition**

<b>Melting point/Melting range:</b>	198 °C (388 °F)
<b>Boiling point/Boiling range:</b>	200 °C (392 °F) (dec)
<b>Sublimation temperature / start:</b>	Not determined
<b>Flammability (solid, gaseous)</b>	Not determined.
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Auto igniting:</b>	Not determined.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Vapor pressure:</b>	Not applicable.
<b>Density at 20 °C (68 °F):</b>	1.42 g/cm <sup>3</sup> (11.85 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Soluble
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>dynamic:</b>	Not applicable.
<b>kinematic:</b>	Not applicable.
<b>Other information</b>	No further relevant information available.

**10 Stability and reactivity****Reactivity** No information known.**Chemical stability** Stable under recommended storage conditions.**Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

**Possibility of hazardous reactions** Reacts with strong oxidizing agents**Incompatible materials:** Oxidizing agents**Hazardous decomposition products:**

Nitrogen oxides

Hydrogen chloride (HCl)

**11 Toxicological information****Information on toxicological effects****Acute toxicity:**

Danger through skin absorption.

Fatal if inhaled.

Fatal in contact with skin.

Fatal if swallowed.

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The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

**ID/LC50 values that are relevant for classification:** No data **Skin**

**irritation or corrosion:** May cause irritation

**Eye irritation or corrosion:** May cause irritation

**Sensitization:** May cause an allergic skin reaction.

**Germ cell mutagenicity:**

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

**Carcinogenicity:** May cause cancer.

**Reproductive toxicity:** No effects known.

**Specific target organ system toxicity - repeated exposure:** No effects known.

**Specific target organ system toxicity - single exposure:** No effects known.

**Aspiration hazard:** No effects known.

**Subacute to chronic toxicity:**

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

**Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

## 12 Ecological information

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**

**Remark:** Very toxic for aquatic organisms

**Additional ecological information:**

**General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies.

May cause long lasting harmful effects to aquatic life. Avoid transfer into the environment.

Very toxic for aquatic organisms

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

**Waste treatment methods**

**Recommendation** Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

**UN-Number**

**DOT, ADR, IMDG, IATA**

UN3288

**UN proper shipping name**

**DOT, IMDG, IATA**

TOXIC SOLID, INORGANIC, N.O.S. (Hydrazine dihydrochloride)

**ADR**

3288 TOXIC SOLID, INORGANIC, N.O.S. (Hydrazine dihydrochloride)

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**Product name: Hydrazine Dihydrochloride**

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**Transport hazard class(es)**

DOT



**Class** 6.1 Toxic substances.  
**Label** 6.1  
**ADR**



**Class** 6.1 (T5) Toxic substances  
**Label** 6.1  
**IMDG, IATA**



**Class** 6.1 Toxic substances.  
**Label** 6.1

**Packing group**

DOT, ADR, IMDG, IATA III

**Environmental hazards:** Environmentally hazardous substance, solid

**Special precautions for user** Warning: Toxic substances

**Danger code (Kemler):** 60

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**Transport/Additional information:**

DOT

**Marine Pollutant (DOT):** No

**UN "Model Regulation":** UN3288, TOXIC SOLID, INORGANIC, N.O.S. (Hydrazine dihydrochloride), 6.1, III

**15 Regulatory information**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL). **SARA Section 313 (specific toxic chemical listings)** Substance is not listed.

**California Proposition 65**

**Prop 65 - Chemicals known to cause cancer** Substance is not listed. **Prop**

**65 - Developmental toxicity** Substance is not listed.

**Prop 65 - Developmental toxicity, female** Substance is not listed. **Prop**

**65 - Developmental toxicity, male** Substance is not listed. **Information**

**about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

For use only by technically qualified individuals.

**Other regulations, limitations and prohibitive regulations**

**Substances of very high concern (SVHC) according to REACH, Article 57**

Substance is not listed.

**REACH - Pre-registered substances** Substance is listed.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure

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**Safety Data Sheet**  
**According to OSHA and ANSI**

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proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. 801056

**Department issuing SDS:** Health, Safety and Environmental Department.**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS:

Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

USA

This information is believed to be accurate and is intended for general guidance. It should not be construed as a guarantee of its suitability for a particular application. Charkit Chemical Company, LLC. offers no warranties either expressed or implied, nor is freedom from any patent owned by Charkit Chemical Company, LLC. or others implied; neither is liability accepted for errors or omissions in the information. Typical properties of products are given for guidance only and do not necessarily represent manufacturing specifications.