

## SAFETY DATA SHEET

**1. Identification****Product identifier** Phenylhydrazine hydrochloride**Other means of identification****Product code** N-13029**Recommended use** For Laboratory Use Only**Recommended restrictions** None known.**Manufacturer/Importer/Supplier/Distributor information****Manufacturer****Company name** Chem Service, Inc.**Address** 660 Tower Lane

West Chester, PA 19380

United States

**Telephone** Toll Free 800-452-9994

Direct 610-692-3026

**Website** www.chemservice.com**E-mail** info@chemservice.com**Emergency phone number** Chemtrec US 800-424-9300

Chemtrec outside US +1 703-527-3887

**2. Hazard(s) identification****Physical hazards** Not classified.**Health hazards**

Acute toxicity, oral Category 3

Acute toxicity, dermal Category 3

Acute toxicity, inhalation Category 3

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Sensitization, skin Category 1

Germ cell mutagenicity Category 2

Carcinogenicity Category 1B

Specific target organ toxicity, repeated exposure Category 1

**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 1**OSHA defined hazards** Not classified.**Label elements****Signal word** Danger**Hazard statement**

Toxic if swallowed. Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic if inhaled. Suspected of causing genetic defects. May cause cancer. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life.

**Precautionary statement****Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

|  |  |
|--|--|
| <b>Response</b>                                  | If swallowed: Immediately call a poison center/doctor. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor. Specific treatment (see this label). Rinse mouth. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. Collect spillage. |
| <b>Storage</b>                                   | Store in a well-ventilated place. Keep container tightly closed. Store locked up.  |
| <b>Disposal</b>                                  | Dispose of contents/container in accordance with local/regional/national/international regulations.  |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.  |
| <b>Supplemental information</b>                  | Not applicable.  |

### 3. Composition/information on ingredients

#### Substances

| Chemical name                 | Common name and synonyms | CAS number | %   |
|-------------------------------|--------------------------|------------|-----|
| Phenylhydrazine hydrochloride |                          | 59-88-1    | 100 |

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.

#### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Take off contaminated clothing and wash before reuse.

#### Eye contact

Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

#### Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

#### Most important symptoms/effects, acute and delayed

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash. May cause redness and pain. Prolonged exposure may cause chronic effects.

#### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

#### General information

Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

#### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

#### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

#### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### Fire-fighting equipment/instructions

Use water spray to cool unopened containers.

#### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

#### General fire hazards

No unusual fire or explosion hazards noted.

## 6. Accidental release measures

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

Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Collect spillage.

**Large Spills:** Wet down with water and dike for later disposal. Following product recovery, flush area with water.

**Small Spills:** Sweep up or vacuum up spillage and collect in suitable container for disposal.

**Environmental precautions**

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not taste or swallow. Avoid breathing dust. Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits**

No exposure limits noted for ingredient(s).

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear eye/face protection. Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

**Appearance**

**Physical state**

Solid.

**Form**

Solid. Crystalline Solid

**Color**

Off-white.

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

489.2 °F (254 °C)

**Initial boiling point and boiling range**

Not available.

|   |                  |
|---|------------------|
| <b>Flash point</b>                                  | Not available.   |
| <b>Evaporation rate</b>                             | Not available.   |
| <b>Flammability (solid, gas)</b>                    | Not available.   |
| <b>Upper/lower flammability or explosive limits</b> |                  |
| <b>Flammability limit - lower (%)</b>               | Not available.   |
| <b>Flammability limit - upper (%)</b>               | Not available.   |
| <b>Explosive limit - lower (%)</b>                  | Not available.   |
| <b>Explosive limit - upper (%)</b>                  | Not available.   |
| <b>Vapor pressure</b>                               | < 0 kPa at 25 °C |
| <b>Vapor density</b>                                | Not available.   |
| <b>Relative density</b>                             | Not available.   |
| <b>Solubility(ies)</b>                              |                  |
| <b>Solubility (water)</b>                           | Not available.   |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.   |
| <b>Auto-ignition temperature</b>                    | Not available.   |
| <b>Decomposition temperature</b>                    | Not available.   |
| <b>Viscosity</b>                                    | Not available.   |
| <b>Other information</b>                            |                  |
| <b>Molecular formula</b>                            | C6H8N2.CIH       |
| <b>Molecular weight</b>                             | 144.61           |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.  |
| <b>Conditions to avoid</b>                | Contact with incompatible materials.  |
| <b>Incompatible materials</b>             | Peroxides. Phenols.   |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## 11. Toxicological information

### Information on likely routes of exposure

|   |  |
|---|--|
| <b>Ingestion</b>  | Toxic if swallowed.  |
| <b>Inhalation</b>   | Toxic by inhalation.   |
| <b>Skin contact</b>   | Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction.   |
| <b>Eye contact</b>  | Causes serious eye irritation.   |
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b> | Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Skin irritation. May cause redness and pain. Dermatitis. Rash. |

### Information on toxicological effects

|  |   |
|--|---|
| <b>Acute toxicity</b>                    | Toxic by inhalation. Toxic if swallowed. Toxic in contact with skin. May cause an allergic skin reaction. |
| <b>Skin corrosion/irritation</b>         | Causes skin irritation.   |
| <b>Serious eye damage/eye irritation</b> | Causes serious eye irritation.  |

### Respiratory or skin sensitization

|                                  |                                       |
|----------------------------------|---------------------------------------|
| <b>Respiratory sensitization</b> | Not available.                        |
| <b>Skin sensitization</b>        | May cause an allergic skin reaction.  |
| <b>Germ cell mutagenicity</b>    | Suspected of causing genetic defects. |
| <b>Carcinogenicity</b>           | May cause cancer.                     |

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

|                              |  |
|------------------------------|--|
| <b>Reproductive toxicity</b> | This product is not expected to cause reproductive or developmental effects. |
|------------------------------|--|

|   |   |
|---|---|
| <b>Specific target organ toxicity - single exposure</b>   | Not classified.   |
| <b>Specific target organ toxicity - repeated exposure</b> | Causes damage to organs through prolonged or repeated exposure. |
| <b>Aspiration hazard</b>                                  | Not available.  |
| <b>Chronic effects</b>                                    | Causes damage to organs through prolonged or repeated exposure. |

## 12. Ecological information

|                                      |   |
|--------------------------------------|---|
| <b>Ecotoxicity</b>                   | Very toxic to aquatic life.   |
| <b>Persistence and degradability</b> | No data is available on the degradability of this product.  |
| <b>Bioaccumulative potential</b>     | No data available.  |
| <b>Mobility in soil</b>              | No data available.  |
| <b>Other adverse effects</b>         | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

## 13. Disposal considerations

|  |  |
|--|--|
| <b>Disposal instructions</b>                 | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| <b>Local disposal regulations</b>            | Dispose in accordance with all applicable regulations.   |
| <b>Hazardous waste code</b>                  | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.   |
| <b>Waste from residues / unused products</b> | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).   |
| <b>Contaminated packaging</b>                | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.   |

## 14. Transport information

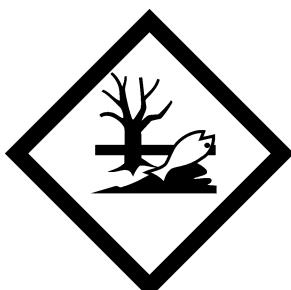
|                                     |   |
|-------------------------------------|---|
| <b>DOT</b>                          |   |
| <b>UN number</b>                    | UN3077  |
| <b>UN proper shipping name</b>      | Environmentally hazardous substances, solid, n.o.s. (Phenylhydrazine hydrochloride), MARINE POLLUTANT |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 9   |
| <b>Subsidiary risk</b>              | -   |
| <b>Label(s)</b>                     | 9   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        |   |
| <b>Marine pollutant</b>             | Yes   |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling.                               |
| <b>Special provisions</b>           | 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33   |
| <b>Packaging exceptions</b>         | 155   |
| <b>Packaging non bulk</b>           | 213   |
| <b>Packaging bulk</b>               | 240   |
| <b>IATA</b>                         |   |
| <b>UN number</b>                    | UN3077  |
| <b>UN proper shipping name</b>      | Environmentally hazardous substance, solid, n.o.s. (Phenylhydrazine hydrochloride)                    |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 9   |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        | No.   |
| <b>ERG Code</b>                     | 9L  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling.                               |
| <b>Other information</b>            |   |
| <b>Passenger and cargo aircraft</b> | Allowed.  |
| <b>Cargo aircraft only</b>          | Allowed.  |
| <b>IMDG</b>                         |   |
| <b>UN number</b>                    | UN3077  |

|   |  |
|---|--|
| <b>UN proper shipping name</b>  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Phenylhydrazine hydrochloride), MARINE POLLUTANT |
| <b>Transport hazard class(es)</b>   |  |
| <b>Class</b>  | 9  |
| <b>Subsidiary risk</b>  | -  |
| <b>Packing group</b>  | III  |
| <b>Environmental hazards</b>  |  |
| <b>Marine pollutant</b>   | Yes  |
| <b>EmS</b>  | F-A, S-F   |
| <b>Special precautions for user</b>   | Read safety instructions, SDS and emergency procedures before handling.                              |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable.  |

DOT; IATA; IMDG



Marine pollutant



## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### SARA 304 Emergency release notification

Phenylhydrazine hydrochloride (CAS 59-88-1) 1000 LBS

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

|                          |                        |
|--------------------------|------------------------|
| <b>Hazard categories</b> | Immediate Hazard - Yes |
|                          | Delayed Hazard - Yes   |
|                          | Fire Hazard - No       |
|                          | Pressure Hazard - No   |
|                          | Reactivity Hazard - No |

### SARA 302 Extremely hazardous substance

| Chemical name                          | CAS number | Reportable quantity | Threshold planning quantity | Threshold planning quantity, lower value | Threshold planning quantity, upper value |
|--|------------|---------------------|-----------------------------|--|--|
| Phenylhydrazine hydrochloride          | 59-88-1    | 1000                |                             | 1000 lbs                                 | 10000 lbs                                |
| <b>SARA 311/312 Hazardous chemical</b> |            | Yes                 |                             |  |  |

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Phenylhydrazine hydrochloride (CAS 59-88-1)

**US. New Jersey Worker and Community Right-to-Know Act**

Phenylhydrazine hydrochloride (CAS 59-88-1) 500 LBS

**US. Pennsylvania RTK - Hazardous Substances**

Phenylhydrazine hydrochloride (CAS 59-88-1)

**US. Rhode Island RTK**

Phenylhydrazine hydrochloride (CAS 59-88-1)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Phenylhydrazine hydrochloride (CAS 59-88-1) Listed: July 1, 1992

**International Inventories**

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | Yes                    |
| Canada                      | Domestic Substances List (DSL)   | Yes                    |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                     |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | Yes                    |
| Korea                       | Existing Chemicals List (ECL)  | Yes                    |
| New Zealand                 | New Zealand Inventory  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).  
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision****Issue date** 04-03-2015**Version #** 01**NFPA ratings**  
Health: 0  
Flammability: 0  
Instability: 0

## Disclaimer

The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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