Phenyl Hydrazine
CAS No 100-63-0

MATERIAL SAFETY DATA SHEET
SDS/MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product name: Phenyl Hydrazine
CAS-No.: 100-63-0

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company: Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi-10002
INDIA

Telephone: +91 11 49404040
Email: care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
- Carcinogenicity (Category 1B), H350
- Germ cell mutagenicity (Category 2), H341
- Acute toxicity, Inhalation (Category 3), H331
- Acute toxicity, Dermal (Category 3), H311
- Acute toxicity, Oral (Category 3), H301
- Specific target organ toxicity - repeated exposure (Category 1), H372
- Eye irritation (Category 2), H319
- Skin irritation (Category 2), H315
- Skin sensitisation (Category 1), H317
- Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

<table>
<thead>
<tr>
<th>T</th>
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<tr>
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<td>R23/24/25, R48/23/24/25</td>
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<td>R45</td>
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<th>Xi</th>
<th>Irritant</th>
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<th>N</th>
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</table>
For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word

Hazard statement(s)

H301  Toxic if swallowed.
H311  Toxic in contact with skin.
H315  Causes skin irritation.
H317  May cause an allergic skin reaction.
H319  Causes serious eye irritation.
H331  Toxic if inhaled.
H341  Suspected of causing genetic defects.
H372  Causes damage to organs through prolonged or repeated exposure.
H400  Very toxic to aquatic life.

Precautionary statement(s)

P201  Obtain special instructions before use.
P261  Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273  Avoid release to the environment.
P280  Wear protective gloves/ protective clothing.
P301 + P310  IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

Restricted to professional users.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : C₆H₈N₂
Molecular Weight : 108.14 g/mol
CAS-No. : 100-63-0
EC-No. : 202-873-5
Index-No. : 612-023-00-9

Hazardous ingredients according to Regulation (EC) No 1272/2008

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<th>Component</th>
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<th>Concentration</th>
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<td>Acute Tox. 3; Skin Irrit. 2; Eye</td>
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<td>Irrit. 2; Skin Sens. 1; Muta. 2;</td>
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<td></td>
<td>Carc. 1B; STOT RE 1; Aquatic</td>
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<td>Acute 1; H301 + H311 + H331,</td>
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<tr>
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<td>H315, H317, H319, H341, H350,</td>
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<td>H372, H400</td>
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</table>

Hazardous ingredients according to Directive 1999/45/EC

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<tr>
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<th>Concentration</th>
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<tbody>
<tr>
<td>Phenylhydrazine</td>
<td>T, N, Carc.Cat.2, Mut.Cat.3,</td>
<td>&lt;= 100 %</td>
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<tr>
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<td>R43 - R48/23/24/25 - R68</td>
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</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx)

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Light sensitive. Store under inert gas. Air sensitive.

7.3 Specific end use(s)
A part from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
a) Appearance Form: liquid
b) Odour no data available
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point  
   Melting point/range: 18 - 21 °C
f) Initial boiling point and boiling range  
   238 - 241 °C
g) Flash point  
   89 °C - closed cup
h) Evaporation rate  
   no data available
i) Flammability (solid, gas)  
   no data available
j) Upper/lower flammability or explosive limits  
   Lower explosion limit: 1,1 % (V)
k) Vapour pressure  
   1,35 hPa at 60 °C
l) Vapour density  
   4,33
m) Relative density  
   1,098 g/mL
n) Water solubility  
   no data available
o) Partition coefficient: n-octanol/water  
   no data available
p) Auto-ignition temperature  
   no data available
q) Decomposition temperature  
   no data available
r) Viscosity  
   no data available
s) Explosive properties  
   no data available
t) Oxidizing properties  
   no data available

9.2 Other safety information
   Surface tension  
   46,1 mN/m at 20 °C
   Relative vapour density  
   4,33

SECTION 10: Stability and reactivity

10.1 Reactivity  
   no data available

10.2 Chemical stability  
   Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions  
   no data available

10.4 Conditions to avoid  
   Heat, flames and sparks.

10.5 Incompatible materials  
   Oxidizing agents

10.6 Hazardous decomposition products  
   Other decomposition products - no data available
   In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects
   Acute toxicity  
   LD50 Oral - rat - 188 mg/kg
LC50 Inhalation - rat - 2.610 mg/m3
LC50 Inhalation - mouse - 2.120 mg/m3

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**

**Respiratory or skin sensitisation**
Hazardous polymerisation may occur.

**Germ cell mutagenicity**
In vitro tests showed mutagenic effects

Ames test
S. typhimurium
Histidine reversion (Ames)

**Carcinogenicity**
Carcinogenicity - rat - Subcutaneous
Tumorigenic:Carcinogenic by RTECS criteria. Liver:Tumors. Skin and Appendages: Other: Tumors.

Possible human carcinogen

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**
Reproductive toxicity - rat - Intraperitoneal
Effects on Newborn: Behavioral.

**Specific target organ toxicity - single exposure**
no data available

**Specific target organ toxicity - repeated exposure**
no data available

**Aspiration hazard**
no data available

**Additional Information**
RTECS: MV8925000
Liver injury may occur., Kidney injury may occur., Blood disorders

**SECTION 12: Ecological information**

12.1 **Toxicity**

Toxicity to fish
LC50 - Danio rerio (zebra fish) - 0,16 - 0,25 mg/l - 48,0 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 2 - 5 mg/l - 48 h

Toxicity to algae
EC50 - Desmodesmus subspicatus (green algae) - 3,2 mg/l

12.2 **Persistence and degradability**

Biodegradability
Biotic/Aerobic - Exposure time 28 d
Result: 97 % - Readily biodegradable.

12.3 **Bioaccumulative potential**

no data available

12.4 **Mobility in soil**

no data available
12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
Very toxic to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 2572  
IMDG: 2572  
IATA: 2572

14.2 UN proper shipping name
ADR/RID: PHENYLHYDRAZINE  
IMDG: PHENYLHYDRAZINE  
IATA: Phenylhydrazine

14.3 Transport hazard class(es)
ADR/RID: 6.1  
IMDG: 6.1  
IATA: 6.1

14.4 Packaging group
ADR/RID: II  
IMDG: II  
IATA: II

14.5 Environmental hazards
ADR/RID: yes  
IMDG Marine pollutant: yes  
IATA: no

14.6 Special precautions for user
no data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.  
Acute toxicity
Aquatic Acute  
Acute aquatic toxicity
Carc.  
Carcinogenicity
Eye Irrit.  
Eye irritation
H301  
Toxic if swallowed.
H301 + H311 +  
Toxic if swallowed, in contact with skin or if inhaled
H331
H311  
Toxic in contact with skin.
H315  
Causes skin irritation.
H317  
May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.

**Full text of R-phrases referred to under sections 2 and 3**

N Dangerous for the environment
T Toxic
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R36/38 Irritating to eyes and skin.
R43 May cause sensitisation by skin contact.
R45 May cause cancer.
R48/23/24/25 Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R50 Very toxic to aquatic organisms.
R68 Possible risk of irreversible effects.

**Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.