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

1.1 **Product identifiers**
- **Product name**: Hydrazine Dihydrochloride
- **CAS-No.**: 5341-61-7

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 Varadaan 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
  - Acute toxicity, Inhalation (Category 3), H331
  - Acute toxicity, Dermal (Category 3), H311
  - Acute toxicity, Oral (Category 3), H301
  - Skin sensitisation (Category 1), H317
  - Acute aquatic toxicity (Category 1), H400
  - Chronic aquatic toxicity (Category 1), H410

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

2.2 **Label elements**
- **Labelling according Regulation (EC) No 1272/2008**
  - **Pictogram**
  - **Signal word**: Danger
  - **Hazard statement(s)**
    - H301: Toxic if swallowed.
    - H311: Toxic in contact with skin.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H350 May cause cancer.
H410 Very toxic to aquatic life with long lasting effects.

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.
P311 Call a POISON CENTER or doctor/ physician.

Supplemental Hazard Statements

Restricted to professional users.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>H4N2 · 2HCl</th>
<th>Molecular weight</th>
<th>104.97 g/mol</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS-No.</td>
<td>5341-61-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>226-283-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>007-014-00-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119510878-31-XXXX</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrazine dihydrochloride</td>
<td>Acute Tox. 3; Skin Sens. 1;</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>5341-61-7</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>226-283-2</td>
<td>Carc. 1B; Aquatic Acute 1;</td>
</tr>
<tr>
<td>Index-No.</td>
<td>007-014-00-6</td>
<td>Aquatic Chronic 1; H301,</td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119510878-31-XXXX</td>
<td>H331, H311, H317, H350,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H400, H410</td>
</tr>
<tr>
<td>M-Factor - Aquatic Acute</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

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

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
Flush eyes with water as a precaution.

If swallowed
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
   Nitrogen oxides (NOx), Hydrogen chloride gas

5.3 Advice for firefighters
   Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
   No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
   Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
   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
   Pick up and arrange disposal without creating dust. Sweep up and shovel. 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 contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.
   Provide appropriate exhaust ventilation at places where dust is formed.
   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.

7.3 Specific end use(s)
   Apart 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 particle respirator type N100 (US) or type P3 (EN 143) 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: solid
b) Odour                No data available
c) Odour Threshold      No data available
d) pH                   No data available
e) Melting point/freezing point Melting point/range: 200 °C
f) Initial boiling point and boiling range No data available
g) Flash point          Not applicable
h) Evaporation rate     No data available
i) Flammability (solid, gas) No data available
j) Upper/lower flammability or explosive limits No data available
k) Vapour pressure      No data available
l) Vapour density       No data available
m) Relative density     1,42 g/mL at 25 °C
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
No data available

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
No data available

10.5 Incompatible materials
Strong oxidizing agents, Bases

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
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
May cause sensitisation by skin contact.

Germ cell mutagenicity
Hamster
ovary
Sister chromatid exchange

Carcinogenicity
Possible human carcinogen

Reproductive toxicity
No data available

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: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Cough, Shortness of breath, Headache, Nausea, Vomiting, Central nervous system depression, May cause convulsions., Liver injury may occur., Kidney injury may occur., Damage to the lungs.
SECTION 12: Ecological information

12.1 Toxicity
   No data available

12.2 Persistence and degradability
   No data available

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**
   Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

   **Contaminated packaging**
   Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
   ADR/RID: 2811     IMDG: 2811     IATA: 2811

14.2 UN proper shipping name
   ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (Hydrazine dihydrochloride)
   IMDG: TOXIC SOLID, ORGANIC, N.O.S. (Hydrazine dihydrochloride)
   IATA: Toxic solid, organic, n.o.s. (Hydrazine dihydrochloride)

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

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

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. 453/2010.

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

Hydrazine dihydrochloride  CAS-No.: 5341-61-7
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)
Carcinogens: category 1B
Restricted to professional users.
See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction

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.

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H350 May cause cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting 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.