ACETIC ACID SOLUTION 5%  MATERIAL SAFETY DATA SHEET SDS/MSDS

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

1.1 Product identifiers
   Product name : Acetic Acid Solution 5%
   Product Code  : 800300

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 -110002
              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
   Skin irritation (Category 2), H315
   Eye irritation (Category 1), H318
   Respiratory Sensitizer (Category 1), H334
   Specific target organs/systemic toxicity following Single Exposure, H370
   Specific target organs/systemic toxicity following Repeated Exposure, H373
   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 : Warning
   Hazard statement(s)
   H315          Causes skin irritation.
   H318          Causes serious eye damage.
   H334          May cause allergy or asthma symptoms or breathing difficulties if inhaled.
   H370          Causes damage to organs.
   H373          May cause damage to organs through prolonged or repeated exposure.
Precautionary statement(s)
P260  Do not breathe fumes, mist, vapors, or spray.
P261  Avoid breathing fumes, mist, vapor or spray.
P264  Wash arms, hands and face thoroughly after handling.
P270  Do not eat, drink, or smoke when using this product.
P280  Wear protective gloves and eye protection.
P285  In case of inadequate ventilation wear respiratory protection.
P302+352  IF ON SKIN: Wash with plenty of soap and water.
P304+341  if inhaled: if breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+351+338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+311  IF exposed: Call a POISON CENTER or physician.
P310  Immediately call a POISON CENTER or physician.
P314  Get medical attention if you feel unwell.
P321  Specific treatment (Wash areas of contact with water).
P332+313  If skin irritation occurs: Get medical attention.
P342+311  If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P362  Take off contaminated clothing and wash it before reuse.
P405  Store locked up.
P501  Dispose of contents in accordance with local, state, federal and international regulations.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Mixture
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>Acetic acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>64-19-7</td>
<td>Flam. Liq. 3; Met. Corr. 1; Skin 5.21 %</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-580-7</td>
<td>Corr. 1A; H226, H290, H314</td>
</tr>
<tr>
<td>Index-No.</td>
<td>607-002-00-6</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 INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

In case of skin contact
IF ON SKIN: Wash with plenty of soap and water. May cause irritation, redness, and pain.

In case of eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

If swallowed
Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.
4.2 Most important symptoms and effects, both acute and delayed
Slightly corrosive. Wash areas of contact with water. If ingested, dilute with water and call a physician if necessary. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain.

4.3 Indication of any immediate medical attention and special treatment needed
Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water).

SECTION 5: Firefighting measures

5.1 Extinguishing media
Use any means suitable for extinguishing surrounding fire.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Use protective clothing and breathing equipment appropriate for the surrounding fire.

5.4 Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3 Methods and materials for containment and cleaning up
Absorb with inert material (vermiculite, sand). Ventilate, if necessary, site of spillage well to evaporate remaining liquid and dispel vapor. Do not flush to sewer. Always comply with local, state, and federal regulations.

6.4 Reference to other sections
No data available

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handling: Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.
Technical protective measures: Provide good ventilation in process area to prevent formation of vapour.

7.2 Conditions for safe storage, including any incompatibilities
Storage: Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.
Storage - away from: Strong bases, Strong acids, Sources of ignition, Direct sunlight.

7.3 Specific end use(s)
None

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). 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. Flame retardant antistatic protective clothing. 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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
Form: liquid
Colour: colourless

b) Odour
Odorless to slight vinegar odor

c) Odour Threshold
No data available

d) pH
2.4

e) Melting point/freezing point
Approximately 0°C

f) Initial boiling point and boiling range
Approximately 100°C - Approximately 100°C

g) Flash point
39°C (Acetic Acid)
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
1.01 g/ml at 20°C

n) Water solubility
completely miscible

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
Direct sunlight. Extremely high or low temperatures.

10.5 Incompatible materials
Strong bases.

10.6 Hazardous decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
No data available

Skin corrosion/irritation
Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

Serious eye damage/eye irritation
Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Respiratory or skin sensitisation
May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

Germ cell mutagenicity
No data available (Acetic acid)

Carcinogenicity
No data available

Reproductive toxicity
No data available (Acetic acid)

Specific target organ toxicity - single exposure
Causes damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration hazard
No data available (Acetic acid)
Additional Information
No data available

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 (Acetic acid)

12.5 Results of PBT and vPvB assessment
The substance does not fulfill the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6 Other adverse effects
Environmental precautions: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

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

14.2 UN proper shipping name
ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

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

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

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

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
H314 Causes severe skin burns and eye damage.
H318                  Causes serious eye damage.
H334                  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H370                  Causes damage to organs.
H373                  May cause damage to organs through prolonged or repeated exposure.

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.