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

1.1 Product identifiers
   Product name : Formamide
   CAS-No. : 75-12-7

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 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 2), H351
   Reproductive toxicity (Category 1B), H360D
   Specific target organ toxicity - repeated exposure, Oral (Category 2), Blood, H373

   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
   Toxic R40, R48/22, R61

   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 : Danger
   Hazard statement(s)
   H351 Suspected of causing cancer.
   H360D May damage the unborn child.
   H373 May cause damage to organs (Blood) through prolonged or repeated
exposure if swallowed.

Precautionary statement(s)
P201 Obtain special instructions before use.
P281 Use personal protective equipment as required.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Supplemental Hazard Statements

Restricted to professional users.

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 Substances
Synonyms:
Amide C1
Formic amide

Formula:
CH₃NO

Molecular weight:
45.04 g/mol

CAS-No.:
75-12-7

EC-No.:
200-842-0

Index-No.:
616-052-00-8

Registration number:
01-2119496064-35-XXXX

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>Formamide</td>
<td>Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>75-12-7</td>
<td>Carc. 2; Repr. 1B; STOT RE &lt;= 100 %</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-842-0</td>
<td>2; H351, H360D, H373</td>
</tr>
<tr>
<td>Index-No.</td>
<td>616-052-00-8</td>
<td></td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119496064-35-XXXX</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formamide</td>
<td>Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>75-12-7</td>
<td>T, R40 - R48/22 - R61 &lt;= 100 %</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-842-0</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>616-052-00-8</td>
<td></td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119496064-35-XXXX</td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases 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. 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
   Carbon oxides, Nitrogen oxides (NOx)

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
   Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe 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.

6.3 Methods and materials for containment and cleaning up
   Soak up with inert absorbent material and dispose of as hazardous waste. 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. For precautions see section 2.2.
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.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

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

Control parameters

Components with workplace control parameters

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
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.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

a) Appearance Form: liquid
b) Odour  
Ammonia odor

c) Odour Threshold  
No data available

d) pH  
4 - 10 at 200 g/l at 20 °C

e) Melting point/freezing point  
Melting point/range: 2 - 3 °C

f) Initial boiling point and boiling range  
210 °C

g) Flash point  
175 °C

h) Evaporation rate  
No data available

i) Flammability (solid, gas)  
No data available

j) Upper/lower flammability or explosive limits  
Upper explosion limit: 19 % (V)  
Lower explosion limit: 2,7 % (V)

k) Vapour pressure  
0,08 hPa at 20 °C

l) Vapour density  
1,56 - (Air = 1.0)

m) Relative density  
1,134 g/mL at 25 °C

n) Water solubility  
completely miscible

o) Partition coefficient: n-octanol/water  
log Pow: -0,819 at 25 °C

p) Auto-ignition temperature  
No data available

q) Decomposition temperature  
> 180 °C -

r) Viscosity  
No data available

s) Explosive properties  
No data available

t) Oxidizing properties  
No data available

9.2 Other safety information

Relative vapour density  
1,56 - (Air = 1.0)

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

10.5 Incompatible materials  
Bases, Oxidizing agents, Hydrogen peroxide, Iodine, Pyridine, Sulphur oxides

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 - male and female - 5.325 mg/kg (OECD Test Guideline 401)
LC50 Inhalation - Rat - male - 4 h - > 21 mg/l (OECD Test Guideline 403)
LD50 Dermal - Rat - male and female - > 3.000 mg/kg

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 20 h

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Mild eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
Ames test
S. typhimurium
Result: negative
Mutagenicity (micronucleus test)
Mouse - male and female
Result: negative

Carcinogenicity
Suspected human carcinogens

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
Presumed human reproductive toxicant

Reproductive toxicity - Rat - Oral
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
Developmental Toxicity - Rat - Skin
Effects on Embryo or Fetus: Fetal death.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Oral - May cause damage to organs through prolonged or repeated exposure. - Blood

Aspiration hazard
No data available

Additional Information
Repeated dose toxicity - Rat - female - Oral - No observed adverse effect level - 40 mg/kg
Repeated dose toxicity - Rat - male and female - Dermal - No observed adverse effect level - 100 mg/kg
RTECS: LQ0525000
Gastrointestinal disturbance, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Blood - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish static test LC50 - Leuciscus idus (Golden orfe) - 6.569 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h
Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 500 mg/l - 72 h
Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - > 1.000 mg/l - 30 min (OECD Test Guideline 209)

12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 99 % - Readily biodegradable (OECD Test Guideline 301A)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
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.

12.6 Other adverse effects
No data available
Adsorbed organic bound halogens (AOX) Remarks: Product does not contain any organic halogens.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
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: - 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
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

Authorisations and/or restrictions on use
Formamide                      CAS-No.: 75-12-7
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
Toxic for reproduction (article 57c)

Formamide                      CAS-No.: 75-12-7
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous
substances, preparations and articles (Annex XVII)
Toxic for reproduction: 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.
Carc. Carcinogenicity
H351 Suspected of causing cancer.
H360D May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
Repr. Reproductive toxicity
STOT RE Specific target organ toxicity - repeated exposure

Full text of R-phrases referred to under sections 2 and 3
T Toxic
R40 Limited evidence of a carcinogenic effect.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R61 May cause harm to the unborn child.

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.cdhhfinechemical.com for additional terms and conditions of sale.