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

1.1 Product identifiers
   Product name: o-Chloro Acetophenone
   CAS-No.: 532-27-4

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
   Acute toxicity, Oral (Category 2), H300
   Acute toxicity, Inhalation (Category 3), H331
   Acute toxicity, Dermal (Category 3), H311
   Skin irritation (Category 2), H315
   Serious eye damage (Category 1), H318
   Respiratory sensitisation (Category 1), H334
   Specific target organ toxicity - single exposure (Category 3), H335
   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): Fatal if swallowed.
H311 + H331 Toxic in contact with skin or if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

Precautionary statement(s)
P261 Avoid breathing dust.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 Call a POISON CENTER /doctor.

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

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms: ω-Chloroacetophenone
Phenacyl chloride

Formula: C8H7ClO
Molecular weight: 154.59 g/mol
CAS-No.: 532-27-4
EC-No.: 208-531-1

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>2-Chloroacetophenone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>532-27-4</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>208-531-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 2; Acute Tox. 3;</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2; Eye Dam. 1;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resp. Sens. 1; STOT SE 3;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H300, H331, H311, H315,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H318, H334, H335</td>
<td></td>
</tr>
</tbody>
</table>

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 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
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, 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.

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. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. 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.
   Store under inert gas.
   Storage class (TRGS 510): Combustible solids, toxic

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

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 (EN 143) respirator cartridges as a backup to engineering controls. If th 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: crystalline
   Colour: beige

b) Odour
   No data available

c) Odour Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   Melting point/range: 54 - 56 °C

f) Initial boiling point and boiling range
   244 - 245 °C

g) Flash point
   No data available

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
   0.07 mmHg at 50 °C

l) Vapour density
   No data available

m) Relative density
   1.324 g/mL at 25 °C

n) Water solubility
   No data available

o) Partition coefficient: n-octanol/water
   log Pow: 1.651

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
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
Bases, Amines, Alcohols

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
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 - 50 mg/kg(2-Chloroacetophenone)
LCLO Inhalation - Human - 20 h - 159 mg/m3(2-Chloroacetophenone)
LD50 Intravenous - Rabbit - 30 mg/kg(2-Chloroacetophenone)
LD50 Intraperitoneal - Rat - 36 mg/kg(2-Chloroacetophenone)
LD50 Intraperitoneal - Guinea pig - 17 mg/kg(2-Chloroacetophenone)
LD50 Intraperitoneal - Mouse - 60 mg/kg(2-Chloroacetophenone)
LD50 Intravenous - Rat - 41 mg/kg(2-Chloroacetophenone)
LD50 Intravenous - Mouse - 81 mg/kg(2-Chloroacetophenone)

Skin corrosion/irritation
Skin - Rat(2-Chloroacetophenone)
Result: Open irritation test - 6 h

Serious eye damage/eye irritation
Eyes - Rabbit(2-Chloroacetophenone)
Result: Severe eye irritation
Remarks: Severe eye irritation

Respiratory or skin sensitisation
May cause sensitisation by inhalation and skin contact.(2-Chloroacetophenone)

Germ cell mutagenicity
Rat(2-Chloroacetophenone)
Liver
DNA damage
Hamster(2-Chloroacetophenone) ovary Cytogenetic analysis

**Carcinogenicity**
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**
No data available(2-Chloroacetophenone)

**Specific target organ toxicity - single exposure**
Inhalation - May cause respiratory irritation.(2-Chloroacetophenone)

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

**Aspiration hazard**
No data available(2-Chloroacetophenone)

**Additional Information**
RTECS: AM6300000
Cough, Shortness of breath, Headache, Nausea, Vomiting(2-Chloroacetophenone)
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(2-Chloroacetophenone)

**SECTION 12: Ecological information**

12.1 **Toxicity**
Toxicity to fish LC50 - Lepomis cyanellus - 1.05 mg/l - 48 h(2-Chloroacetophenone)

12.2 **Persistence and degradability**
No data available

12.3 **Bioaccumulative potential**
No data available

12.4 **Mobility in soil**
No data available(2-Chloroacetophenone)

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

**SECTION 13: Disposal considerations**

13.1 **Waste treatment methods**

**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

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

**SECTION 14: Transport information**

14.1 **UN number**
ADR/RID: 1697  IMDG: 1697  IATA: 1697
14.2 UN proper shipping name
ADR/RID: CHLOROACETOPHENONE, SOLID
IMDG: CHLOROACETOPHENONE, SOLID
IATA: Chloroacetophenone, solid
Passenger Aircraft: Not permitted for transport

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: 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
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.

H300    Fatal if swallowed.
H311    Toxic in contact with skin.
H311 + H331  Toxic in contact with skin or if inhaled.
H315    Causes skin irritation.
H318    Causes serious eye damage.
H331    Toxic if inhaled.
H334    May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335    May cause respiratory irritation.

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.