1. **IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

1.1 **Product identifiers**
- **Product name**: Palladium Chloride (Pd 59-60%)
- **CAS-No.**: 7647-10-1

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]

2. **HAZARDS IDENTIFICATION**

2.1 **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**
  Acute toxicity, Oral (Category 3)
  Skin sensitization (Category 1)
- **Classification according to EU Directives 67/548/EEC or 1999/45/EC**
  Toxic if swallowed. May cause sensitization by skin contact.

2.2 **Label elements**
- **Labelling according Regulation (EC) No 1272/2008 [CLP]**
  Pictogram

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H301</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H317</td>
<td>Wear protective gloves.</td>
</tr>
<tr>
<td>P280</td>
<td>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</td>
</tr>
<tr>
<td>P301 + P310</td>
<td>none</td>
</tr>
</tbody>
</table>

**MATERIAL SAFETY DATA SHEET**

**SDS/MSDS**
Hazard symbol(s)

R-phrase(s)
R25  Toxic if swallowed.
R43  May cause sensitization by skin contact.

S-phrase(s)
S36/37 Wear suitable protective clothing and gloves.
S45  In case of accident or if you feel unwell, seek medical advice immediately
     (show the label where possible).

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
   Formula : \( \text{Cl}_2\text{Pd} \)
   Molecular Weight : 177.33 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palladium dichloride</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>7647-10-1</td>
</tr>
<tr>
<td>EC-No.</td>
<td>231-596-2</td>
</tr>
</tbody>
</table>

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
   Contact with skin can cause: Dermatitis, Allergic reactions

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

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
   Hydrogen chloride gas

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

5.4 Further information
   no data available
6. **ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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.

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.

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)**
no data available

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 a full-face particle respirator type N99 (US) or type P2 (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).
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: 678 - 680 °C - lit.
f) Initial boiling point and boiling range no data available
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 no data available
l) Vapour density no data available
m) Relative density 4 g/cm³ 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

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available

10.2 Chemical stability
no data available

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
no data available

10.6 Hazardous decomposition products
Other decomposition products - no data available
11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

**Acute toxicity**
- LD50 Oral - rat: 2.704 mg/kg
- LD50 Oral - mouse: > 1.000 mg/kg
- LD50 Oral - rat: 200 mg/kg

**Skin corrosion/irritation**
- Skin - rabbit: Mild skin irritation - 24 h - Draize Test

**Serious eye damage/eye irritation**
- no data available

**Respiratory or skin sensitization**
- May cause allergic skin reaction.

**Germ cell mutagenicity**
- Genotoxicity in vitro - Human - lymphocyte
- DNA inhibition

**Carcinogenicity**
- Carcinogenicity - mouse - Oral
- 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 - Intratesticular
  - Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).
  - Paternal Effects: Testes, epididymis, sperm duct.
- Reproductive toxicity - mouse - Subcutaneous
  - Paternal Effects: Testes, epididymis, sperm duct.
  - 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

**Potential health effects**
- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion**: Toxic if swallowed.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.

**Signs and Symptoms of Exposure**
- Contact with skin can cause: Dermatitis, Allergic reactions

**Additional Information**
- RTECS: RT3500000

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
no data available

12.6 Other adverse effects
no data available

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 chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 3288  IMDG: 3288  IATA: 3288

14.2 UN proper shipping name
ADR/RID: TOXIC SOLID, INORGANIC, N.O.S. (Palladium dichloride)
IMDG: TOXIC SOLID, INORGANIC, N.O.S. (Palladium dichloride)
IATA: Toxic solid, inorganic, n.o.s. (Palladium dichloride)

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: no  IMDG Marine Pollutant: no  IATA: no

14.6 Special precautions for user
no data available

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
no data available

16. OTHER INFORMATION

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.