

**Safety data sheet**  
**According to Regulation n. 1907/2006 and Regulation 878/2020**  
**CHLORIDE PD SALE 60%**



Revision n. 9 – 19.09.2024  
 Replaces revision n. 8 – 02.04.2024

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

**1.1 Product identifier**

|                  |                         |
|------------------|-------------------------|
| Chemical name    | Palladium (II) chloride |
| Product codes    | 117<br>517              |
| C.A.S.           | 7647-10-1               |
| EC number        | 231-596-2               |
| Molecular weight | 177,3 g/mol             |
| Raw formula      | PdCl <sub>2</sub>       |

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

|                      |   |
|----------------------|---|
| Intended uses        | Industrial use. Reagent for electroplating and catalyst production. |
| Advised against uses | Uses not recommended: none in particular                            |

**1.3 Details of the supplier of the safety data sheet**

|  |   |
|--|---|
| Name   | FAGGI ENRICO S.P.A.                             |
| Address  | Via Majorana, 101/103 50019 Sesto Fiorentino FI |
| Telephone number                                       | 055311861                                       |
| Fax number   | 055311791                                       |
| Competent person responsible for the safety data sheet | lorenzo.magaldi@faggi.it                        |

**1.4 Emergency telephone number** 111 - Medical helpline operating in England, in Scotland (NHS 24) and in Wales (NHS Direct Wales).  
01-2120139168-54-0003

**1.5 Reach registration number**

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

| Hazard classes  | Category codes | Hazard statements |
|-----------------|----------------|-------------------|
| Met corr.       | 1              | H290              |
| Acute Tox.      | 4              | H302              |
| Skin Sens.      | 1              | H317              |
| Eye Irrit.      | 1              | H318              |
| Aquatic acute   | 1              | H400              |
| Aquatic Chronic | 1              | H410              |

**2.2 Label elements**

**Pictograms**



**Signal word** DANGER

|                          |      |  |
|--------------------------|------|--|
| <b>Hazard statements</b> | H290 | May be corrosive to metals                           |
|                          | H302 | Harmful if swallowed                                 |
|                          | H317 | May cause an allergic skin reaction                  |
|                          | H318 | Causes serious eye damage                            |
|                          | H410 | Very toxic to aquatic life with long lasting effects |

|                                 |      |                                       |
|---------------------------------|------|---------------------------------------|
| <b>Precautionary statements</b> | P270 | Do not eat, drink or smoke during use |
|---------------------------------|------|---------------------------------------|

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|                |   |
|----------------|---|
| P280           | Wear protective gloves / clothing. Protect eyes / face.   |
| P305+P351+P338 | IN CASE OF EYE CONTACT:<br>Rinse thoroughly for several minutes. Remove any contact lenses if easy to do. Continue rinsing. |
| P310           | Immediately contact a poison control center or doctor.  |
| P330           | IF SWALLOWED: rinse mouth.  |
| P501           | Dispose of the product / container in accordance with national regulations  |

**2.3 Other hazards**  
 It does NOT contain PBT / vPvB substances according to Regulation (EC) 1907/2006, annex XIII  
 It does NOT contain substances that interfere with the endocrine system in accordance with Regulation (EC) 1907/2006 art.59 paragraph 1 and in accordance with the criteria established in Regulation (EU) 2017/2100 and Regulation (EU) 2018/605.

**REACH registration number** 01-2120139168-54-0003

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1** Substance : Palladium (II) chloride  
 CAS number 7647-10-1  
 EC number 231-596-2  
 INDEX number Not available  
 ATE LD50 oral 479 mg/kg bw (rat)  
 M factor: acute 100  
 M factor: chronic 10

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

|                   |   |
|-------------------|---|
| Inhalation        | Take the person to a very well ventilated area and consult a doctor for safety. If the person is unconscious, keep him stable on his side during transport.           |
| Ingestion         | Call a doctor immediately.  |
| Contact with skin | Wash immediately with soap and water and rinse thoroughly.  |
| Contact with eyes | Rinse with plenty of running water for at least 15 minutes while keeping the eyelids open (remove contact lenses if it is easy to do so). Consult an ophthalmologist. |

Recommendations:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Need to see a doctor immediately</li> <li>• Possibility of delayed effects following exposure</li> <li>• Move the exposed individual from the place of exposure to the open air</li> <li>• Remove the clothing and shoes of the exposed individual</li> <li>• How to handle contaminated clothing</li> </ul> | YES<br>YES<br>YES<br>YES<br>With gloves<br>YES |
|---|--|

**4.2 Most important symptoms and effects, both acute and delayed**

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Contact with the skin can cause dermatitis or allergic reactions.

**4.3 Indication of any immediate medical attention and special treatment needed**

Symptoms of poisoning may appear after many hours, for this reason medical supervision is required in the 48 hours following the accident.

**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

Suitable extinguishing media      CO2 or powder or water spray extinguishers. Extinguish large fires with water spray or alcohol-resistant foam.

Unsuitable extinguishing media      None

**5.2 Special hazards arising from the substance or mixture**

Avoid breathing fumes

**5.3 Advice for firefighters**

Normal fire-fighting clothing, such as self-contained open-circuit compressed air breathing apparatus (EN137), flame retardant suit (EN469), flame retardant gloves (EN659) and firefighter boots (HOA29 or A30).

**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**6.1.1. For non-emergency personnel**

Keep away from contaminated area

**6.1.2. For emergency responders**

Use :

Chemical risk gloves compliant with EN420 EN374 standards

Splash goggles compliant with Directive 89/686 / EEC and standard EN166: 2001

Complete antacid clothing compliant with the UNI EN 13034: 2006 type 6 standard

Semi-face mask with P2 filters

**6.2 Environmental precautions**

In the event of infiltration into bodies of water or sewers or penetration into the ground, notify the competent authorities.

**6.3 Methods and material for containment and cleaning up**

**6.3.1. Advice in order to contain a spill**

Avoid formation of dust

**6.3.2. Advice in order to clean-up a spill**

Wash the contaminated area with water. Prevent infiltration into the sewer, groundwater and surface water

**6.3.3 Other information**

None.

**6.4 Reference to other sections**

None

**7. HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

**7.1.1. Recommendations in order to manipulate the substance or the mixture in a safe manner, such as containment measures and prevention of fire and aerosol and powders formation**

Use under suction. Close the jars immediately after use. Use is permitted only to trained and informed personnel.

**7.1.2. General recommendation on work hygiene**

Do not eat, drink and smoke in work areas. Wash your hands after use. Remove contaminated clothing and protective equipment before entering eating areas

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- 7.2. Conditions for safe storage, including any incompatibilities**
- 7.2.1. Risk management associated with explosive atmospheres, corrosive conditions, flammability hazards, incompatible substances or mixtures, evaporative conditions, potential ignition sources**  
Store in an area without drains or access to sewers and protected from humidity
- 7.2.2. Control of weather conditions, ambient pressure, temperature, sunlight, humidity, and vibration**  
Keep in closed containers
- 7.2.3. Conditions to maintain the integrity of the substance or mixture**  
Store in a cool and dry warehouse
- 7.2.4. Advice regarding the ventilation, specific design for storage rooms or vessels, quantity limits under storage conditions, packaging compatibilities**  
Storage containers must be approved according to the ADR regulations and labeled.

- 7.3. Specific end use(s)**  
Industrial use. Industrial use. Reagent for electroplating and catalyst production.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**DNEL**

No DNEL value available to date

**PNEC**

No PNEC value available to date

**8.2. Exposure controls**

**8.2.1. Appropriate engineering controls**

Periodically check the range of the extractor hood

**8.2.2. Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Protective goggles for eyes compliant with Directive 89/686 / EEC and with standard EN166: 2001

**Skin protection (hands)**

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact Protective index 6, corresponding to >480 minutes of permeation time according to EN 374 recommended; e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm)

**Skin protection (body)**

Complete antacid clothing compliant with the UNI EN 13034: 2006 type 6 standard

**Respiratory protection**

Semi-face mask with P2 filters

**Thermal hazards**

The substance does not present thermal hazards

**8.2.3. Environmental exposure controls**

Maintain suction in all environments using localized collection and ambient air exchange systems. Convey the aspirated volumes to an abatement system and then into the atmosphere. Do not use recirculating air suction systems. Avoid any spill into the environment.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

|                              |           |
|------------------------------|-----------|
| Physical state               | Solid     |
| Colour                       | Brown red |
| Odour                        | Odorless  |
| Melting point/freezing point | 679 ° C   |

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|             |   |  |
|-------------|---|--|
|             | Boiling point or initial boiling point and boiling range                        | Data not available   |
|             | Flammability  | Not inflammable  |
|             | Lower and upper explosion limit   | Not explosive  |
|             | Flash point   | Not inflammable  |
|             | Auto-ignition temperature   | Not inflammable  |
|             | Decomposition temperature   | Not inflammable  |
|             | pH  | Not applicable   |
|             | Kinematic viscosity   | Not applicable   |
|             | Solubility  | Almost insoluble in water  |
|             | Partition coefficient n-octanol/water (log value)                               | Not applicable   |
|             | Vapour pressure   | Not applicable   |
|             | Density and/or relative density   | 4 g / cm <sup>3</sup> at 20 ° C                                  |
|             | Relative vapour density   | Not applicable   |
|             | Particle characteristics  | <100 µm: 91.8%   |
| <b>9.2.</b> | <b>Other information</b>  |  |
|             | None  |  |
| <b>10.</b>  | <b>STABILITY AND REACTIVITY</b>   |  |
| <b>10.1</b> | <b>Reactivity</b>   |  |
|             | It can be corrosive to some metals due to the presence of chloride              |  |
| <b>10.2</b> | <b>Chemical stability</b>   |  |
|             | The product is stable   |  |
| <b>10.3</b> | <b>Possibility of hazardous reactions</b>                                       |  |
|             | There are no known dangerous reactions.   |  |
| <b>10.4</b> | <b>Conditions to avoid</b>  |  |
|             | None  |  |
| <b>10.5</b> | <b>Incompatible materials</b>   |  |
|             | Strong oxidants   |  |
| <b>10.6</b> | <b>Hazardous decomposition products</b>   |  |
|             | The product does not decompose  |  |
| <b>11.</b>  | <b>TOXICOLOGICAL INFORMATION</b>  |  |
| <b>11.1</b> | <b>Information on hazard classes as defined in Regulation (EC) No 1272/2008</b> |  |
|             | <b>Acute toxicity</b>   | Oral LD50 479 mg / kg bw rat                                     |
|             | <b>Skin corrosion / irritation</b>  | Based on available data, the classification criteria are not met |
|             | <b>Serious eye damage/irritation</b>  | Serious eye damage   |
|             | <b>Respiratory or skin sensitization</b>  | It can cause an allergic reaction on the skin.                   |
|             | <b>Germ cell mutagenicity</b>   | Based on available data, the classification criteria are not met |
|             | <b>Carcinogenicity</b>  | Based on available data, the classification criteria are not met |
|             | <b>Reproductive toxicity</b>  | Based on available data, the classification criteria are not met |
|             | <b>STOT – single exposure</b>   | Based on available data, the classification criteria are not met |

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**STOT – repeated exposure**

Based on available data, the classification criteria are not met

**11.2 Information on other hazards**

None

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

LC10 (fish) (96h) 90.4 µg Pd/L  
 LC50 (fish)(96h) 154 µg Pd/L  
 EC50 (invertebrates) (48 h) 35.19 µg Pd/L  
 NOEC (invertebrates) (48 h) 20.52 µg Pd/L  
 NOEC (invertebrates)(21 days) ≥ 14.3 µg Pd/L  
 EC50 (algae) (72 h) 2.03 µg Pd/L  
 NOEC (algae) (72 h) 1.33 µg Pd/L

**12.2 Persistence and degradability**

Not applicable

**12.3 Bioaccumulative potential**

Data not available

**12.4 Mobility in soil**

Data not available

**12.5 Results of PBT and vPvB assessment**

Not applicable

**12.6 Endocrine disrupting properties**

No known effect

**12.7 Other adverse effects**

No known effect

**13. DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

The substance and its packaging must be disposed of as hazardous waste and delivered to authorized companies.

**14. TRANSPORT INFORMATION**

**14.1 UN number or ID number**

1759

**14.2 Official UN shipping name**

Corrosive solid n.o.s. (Pd dichloride)

**14.3 Transport hazard class(es)**

ADR/RID/IMDG/ICAO-IATA: Class:  
 ADR/RID/IMDG/ICAO-IATA: Label:  
 ADR: Tunnel restriction code  
 IMDG - EmS:

8  
 8 + mark “enviromental hazard”  
 E  
 F-A, S-A

**14.4 Packing group**

III

**14.5 Dangers for the environment**

ADR/RID/ICAO-IATA:  
 IMDG: Marine Contaminant:

Product dangerous for enviroment  
 Yes

**14.6 Special precautions for user**

Transport must be carried out by vehicles authorized for the transport of dangerous goods according to the provisions of the current edition of the A.D.R. Agreement. and the applicable national provisions. Transport must be carried out in the original packaging and, in any case, in packaging which is made of materials which cannot be attacked by the contents, and which are not likely to generate dangerous reactions. Those responsible for loading and unloading dangerous goods must have received

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appropriate training on the risks presented by the preparation and on any procedures to be adopted in the event of emergency situations.

Bulk transport is not foreseen

**14.7 Maritime transport in bulk according to IMO instruments**

**15. REGULATORY INFORMATION**

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

Reg. (EC) 1907/2006 / EC Reach YES

Reg. (EC) 1272/2008 CLP and subsequent changes and additions YES

Reg. (CE) 2037/2000 "Substances that deplete the ozone layer" NO

Reg. (EC) 850/2004 "Persistent organic pollutants" NO

Reg. (EC) 689/2008 "export and import of dangerous chemicals" NO

Substance listed in Annex I of Dir. 2012/18 / EU so-called Seveso YES

Legislative Decree 81/2008 Consolidated Law on health and safety at work YES

Directive 2014/103 / EU "Adr" YES

Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC) NO

Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List NO

Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List Limited use

<https://echa.europa.eu/it/substances-restricted-under-reach>  
 Item 75  
 (check link)

**15.2 Chemical safety assessment**

A chemical safety assessment was not carried out

**16. OTHER INFORMATION**

**16.1 Changes compared to the previous edition**

Changes to sections 1-2-8-11-12-14-16

**16.2 Acronym and abbreviation legend**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

GHS: Globally Harmonized System of Classification and Labeling of Substances

EINECS: European Inventory of Chemical Substances

CAS: Chemical Abstract Service

STA: Acute Toxicity Estimate

PBT: Persistent, Bioaccumulative and Toxic.

vPvB: (very persistent and very bioaccumulative). Very persistent and very bioaccumulative

LD: lethal dose

PNEC: predicted no effect concentration

DNEL: derived no effect level

TLV (ceiling value): threshold limit value

STEL: short-term exposure limit

EU-OEL: European occupational exposure limit

TWA: time-weighted average

EC: effective concentration

NOAEL: no observed adverse effect level

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LC: lethal concentration

NOEC: no observed effect concentration

LOEC: lowest observed effect concentration

Bw: body weight

Koc: organic carbon-water partition coefficient

**16.3 Main references and data sources**

**ECHA's data bank on registered substances and soon to be registered substances:**

<https://chem.echa.europa.eu/>

**16.5 Adequate training for workers in order to ensure the protection of human health and the environment**

Training on Chemical Risk pursuant to Legislative Decree 81/08 Title IX dangerous substances

PPE training