

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- **Trade name:** **Palladiumchlorid 59,5 - 60% Pd**
Palladiumchloride 59,5 - 60 % Pd
- **Article number:** 4040710201, 4040710301, 4040710401, 4040710501, 4040710601, 4040710101
- **CAS Number:**
7647-10-1
- **EC number:**
231-596-2
- **Registration number** 01-2120139168-54

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

- SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
- SU9 Manufacture of fine chemicals
- SU14 Manufacture of basic metals, including alloys
- SU15 Manufacture of fabricated metal products, except machinery and equipment
- SU16 Manufacture of computer, electronic and optical products, electrical equipment
- SU17 General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
- SU24 Scientific research and development

Product category

- PC9a Coatings and paints, thinners, paint removers
- PC14 Metal surface treatment products
- PC15 Non-metal-surface treatment products
- PC19 Intermediate
- PC21 Laboratory chemicals
- PC33 Semiconductors

Process category

- PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
- PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC4 Chemical production where opportunity for exposure arises
- PROC5 Mixing or blending in batch processes
- PROC7 Industrial spraying
- PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
- PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC13 Treatment of articles by dipping and pouring
- PROC15 Use as laboratory reagent
- PROC26 Handling of solid inorganic substances at ambient temperature

Environmental release category

- ERC1 Manufacture of the substance
- ERC2 Formulation into mixture
- ERC5 Use at industrial site leading to inclusion into/onto article
- ERC6a Use of intermediate

Application of the substance / the mixture

- Initial product for chemical reactions
- Catalyst

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

- Wieland Edelmetalle GmbH
- Schwenninger Str. 13
- 75179 Pforzheim
- Telefon +49 (07231)-1393-0, Telefax +49 (07231)-1393-100

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Further information obtainable from:Wieland Edelmetalle GmbH
www.wieland-edelmetalle.de
msds@wieland-edelmetalle.de**1.4 Emergency telephone number:**

Emergency CONTACT (24-Hour-Number):GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Met. Corr. 1 H290 May be corrosive to metals.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05



GHS07



GHS09

Signal word Danger**Hazard-determining components of labelling:**

palladium dichloride

Hazard statements

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves / eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P312 Call a POISON CENTER/doctor if you feel unwell.
P406 Store in corrosive resistant container with a resistant inner liner.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**
7647-10-1 palladium dichloride
- **Identification number(s)**
- **EC number:** 231-596-2

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** Hydrogen chloride (HCl)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 Reference to other sections** See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Unsuitable material for receptacle: steel.
Unsuitable material for receptacle: aluminium.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in dry conditions.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Filter P2
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**
Chloroprene rubber, CR
Butyl rubber, BR
Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Powder
· Colour:	Red-brown
· Odour:	Odourless

· **pH-value:** Acidic

· **Change in condition**

· Melting point/freezing point:	680 (Zers.) °C
· Initial boiling point and boiling range:	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Product is not flammable.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

· Oxidising properties	None
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· **Density at 20 °C:** 4.0 g/cm³

· **Bulk density at 20 °C:** ca.2200 kg/m³

· **Solubility in / Miscibility with**

· water:	Insoluble.
· Organic solvents:	0.0 %

· **Solids content:** 100.0 %

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:**

To avoid thermal decomposition do not overheat.
>600 °C

· **10.3 Possibility of hazardous reactions**

Reacts with strong acids.
Reacts with strong oxidising agents.
Reacts with light metals.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

· **10.6 Hazardous decomposition products:** Hydrogen chloride (HCl)

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SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

7647-10-1 palladium dichloride

Oral	LD50	2,704 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Contact manufacturer for recycling information.
Must be specially treated adhering to official regulations.

· European waste catalogue

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals
16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances

- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

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Packagings that may not be cleansed are to be disposed of in the same manner as the product.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	3260
· 14.2 UN proper shipping name · ADR · IMDG, IATA	3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (palladium dichloride) CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (palladium dichloride)
· 14.3 Transport hazard class(es) · ADR	
· Class · Label	8 (C2) Corrosive substances. 8
· IMDG, IATA	
· Class · Label	8 Corrosive substances. 8
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR):	No Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Corrosive substances. 80 F-A,S-B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Transport category · Tunnel restriction code	LQ24 3 E
· UN "Model Regulation":	UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **National regulations:**
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Abteilung Umweltschutz
- **Abbreviations and acronyms:**
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 - ICAO: International Civil Aviation Organisation
 - ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Met. Corr. 1: Corrosive to metals – Category 1
 - Acute Tox. 4: Acute toxicity – Category 4
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Skin Sens. 1: Skin sensitisation – Category 1
 - Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 - Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- *** Data compared to the previous version altered.**

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