

Safety Data Sheet

Palladium (II) Chloride

Created : Sep. 24. 2010

Revised : Feb. 01. 2020

1. Product and Company Information

Product Name : Palladium (II) Chloride
 Company Name : Toyo Chemical Industrial Co., Ltd.
 Address : 2-26-13 Naka-Izumi, Komae-City, Tokyo
 Tel : +81-3-3489-5152
 Fax : +81-3-3488-1706
 Emergency Contact : As above
 Recommended use of the product
 and restrictions on use : Palladium plating, catalysts

2. Hazard identification

GHS classification of the substance

Health hazards :	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity :	Category 1
	Specific target organ toxicity, repeated exposure	Category 2 (Lung, kidney, vascular system)
Environmental hazards :	Hazardous to the aquatic environment, long-term hazard	Category 2

GHS Label elements

Pictograms :



Signal word :

Danger

Hazard Statements :

H302 : Harmful if swallowed
 H312 : Harmful in contact with skin
 H315 : Causes skin irritation
 H319 : Causes serious eye irritation
 H360 : May damage fertility or the unborn child
 H373 : May cause damage to organs through prolonged or repeated exposure
 H411 : Toxic to aquatic life with long lasting effects

Precautionary statement

Safety Measures :

P201 : Obtain special instructions before use.
 P202 : Do not handle until all safety precautions have been read and understood.
 P260 : Do not breathe dust/fume/gas/mist/vapors/spray.
 P264 : Wash ... thoroughly after handling.
 P270 : Do not eat, drink or smoke when using this product.
 P273 : Avoid release to the environment.
 P280 : Wear protective gloves/protective clothing/eye protection/face protection.
 P312 : Call a doctor if you feel unwell.
 P314 : Get medical advice/attention if you feel unwell.
 P330 : Rinse mouth.
 P391 : Collect spillage.

Emergency Measures :

P301 + P312 : Call a doctor/... IF you feel unwell.
 P302 + P352 : IF ON SKIN : Wash with plenty of water/soap
 P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses if present and easy to do. Continue rinsing.

P308 + P313 : If exposed or concerned : Get medical advice/attention.

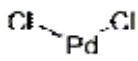
P337 + P313 : If eye irritation persists : Get medical advice/attention.

P362 + P364 : Take off contaminated clothing and wash it before reuse.

P405 : Store locked up.

Storage :
 Disposal :
 Other hazards :
 P501 : Dispose of contents/container entrust to a specialized waste disposal company.
 No information

3. Composition/information on ingredients

Substance or Mixture :	Substance
Chemical name or general name :	Palladium (II) Chloride
Another name:	—
Concentration or concentration range :	100%
Molecular formula (molecular weight) :	PdCl ₂ (177.33)
Chemical characteristics (rational or structural formula) :	
CAS No. :	7647-10-1
Reference numbers in gazetted list in Japan(CSCL and ISHL) :	1-253
Impurities and stabilizing additives that contribute to classification :	—

4. First-aid measures

If inhalation :	Blow your nose / gargle. Get medical advice/attention if you feel unwell.
Skin contact :	Take off contaminated clothing, shoes, etc. Wash with plenty of water, warm water, etc. Get medical attention if appearance changes or pain persists.
Eye contact :	Rinse cautiously with water for several minutes. Continue rinsing. Immediately call a doctor.
Ingestion :	Rinse mouth. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed :	No information
Protection of people implementing emergency measures :	No information
Special precautions for physicians :	No information

5. Fire-fighting measures

Suitable extinguishing media :	Copious amounts of water, dry sand
Do not use extinguishing media :	No information
Specific hazards :	May intensify fire. This substance can decompose when heated to outbreak harmful gas, so wear protective equipment when firefighting.
Specific fire extinguishing method :	In case of fire in the surroundings, immediately move the container to a safe place. If it cannot be moved, cool it by sprinkling water around the container and its surroundings.
Special protective actions fire-fighters :	Firefighting should be done upwind and avoid inhalation of harmful gases. Wear respiratory protection as appropriate. Keep away all people unrelated to disaster prevention activities upwind.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures :	Workers must wear appropriate protective equipment (see section 8. Exposure Controls / Personal Protection) and avoid contact with eyes and skin and inhalation. During work, wear protective equipment to prevent inhalation of dust, dust and gas, and work from the windward side.
Environmental precautions:	Avoid discharging into the environment.
Methods and materials for containment and cleaning up :	No information
Collection and neutralization :	No information
Preventing secondary accidents :	Prevent inflow to drainage ditches, sewers, cellars, or sealed locations.

7. Handling and storage

Handling	
Technical measures :	Take the equipment measures described in "8. Exposure controls/personal protection" and wear protective equipment. Described in "8. Exposure controls/personal protection" perform local exhaust and general ventilation.
Precautions for safe handling :	Obtain instructions for use before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Avoid swallowing. Do not get in eyes. Avoid discharging into the environment. See "10. Stability and Reactivity" section.
Contact evasion :	
Storage	
Safe storage conditions :	Store locked up. Store in a closed container, dry and cool place. Store in the dark place. Technical measures:No information
Container and packing materials :	Airtight containers (glass, polyethylene, etc.)

8. Exposure controls/personal protection

Control concentration :	No information
Tolerable concentration :	
Japan Society for Occupational Health (2015)	No information
ACGIH (2013)	No information
Equipment measures :	Workplaces storing or handling this material should be equipped with an eyewash facilities and safety shower. Enclose the equipment or install a local exhaust ventilation to prevent exposure.
Protective Equipment	
Respiratory protection :	Wear suitable respiratory equipment (gas mask (in case of fire: air respirator), dust mask).
Hand protection :	Wear protective gloves. (Rubber gloves, etc.)
Eye protection :	Wear appropriate eye protection (regular glasses, plain glasses with side plates, goggles).
Skin and body protection :	Wear appropriate protective clothing and protective boots.

9. Physical and Chemical Properties

Physical state :	Absorbent powder
Color :	Dark red or dark brown
Odor :	Slight hydrochloric acid odor
Odor threshold :	No information
pH :	No information
Melting point/freezing point :	No information

Boiling point, initial boiling point, and boiling range :	No information
Ignition point :	No information
Vaporization speed (butyl acetate=1) :	No information
Burnability (solids and gas) :	No information
Explosion range :	No information
Vapor pressure :	920°C, 1 atmosphere
Vapor density (vapor=1) :	No information
Specific gravity (density) :	4.0
Solubility :	No information
n-Octanol/water partition coefficient :	No information
Spontaneous ignition temperature :	No information
Decomposition temperature :	Sublimation / decomposition at 600 °C or more.
Viscosity :	No information

10. Stability and Reactivity

Reactivity :	No information
Chemical stability :	Storage and handling in accordance with laws and regulations is considered stable.
Possibility of hazardous reactions :	Reacts violently with strong reducing agents.
Conditions to avoided :	Heat, reducing agents
Incompatible materials :	Reducing substances
Hazardous decomposition products :	Hydrogen chlorides

11. Toxicological Information

Acute toxicity	
Oral:	It has been reported that when given to mice as drinking water, growth is reduced and malignant lung tumors are caused, but classification is not possible due to insufficient data. Rat IV: LD50 20mg/kg, reported necrosis at the site of administration, but classification is not possible due to insufficient data.
Dermal :	
Inhalation : Gases	The definition of GHS is a solid.
Inhalation : Vapours	The definition of GHS is a solid.
Inhalation : Dusts and mists	Classification not possible due to lack of data.
Skin corrosios/irritation :	Rabbits: Skin; 100mg/24hr mild, but cannot classify it because it is lacking in data.
Serious eye damage/irritation :	Classification not possible due to lack of data.
Respiratory sensitization :	Classification not possible due to lack of data.
Skin sensitization :	Classification not possible due to lack of data.
Germ-cell mutagenicity :	Classification not possible due to lack of data.
Carcinogenicity :	Classification not possible due to lack of data.
Reproductive toxicity :	Classification not possible due to lack of data.
Specific target organ toxicity (single exposure) :	Classification not possible due to lack of data.
Specific target organ toxicity (repeated exposure) :	Classification not possible due to lack of data.
Aspiration hazard :	Classification not possible due to lack of data.

12. Ecological Information

Toxicity	
Hazardous to the aquatic environment (Acute) :	Classification not possible due to lack of data.
Hazardous to the aquatic environment (long-term) :	Classification not possible due to lack of data.
Hazard to the ozone layer :	The materials concerned are not listed by an affiliated book of Montreal Protocol.

13. Disposal Precautions

Residual waste :

Recover palladium using reduction roasting or oxidative precipitation.
Do not incinerate in an incinerator or the like without a cleaning device because a gas containing harmful components is generated during incineration
(It is desirable to outsource to a specialized company).

Dirty containers and packaging :

Containers should be disposed of properly according to relevant laws and local government standards.
When disposing of empty containers, completely remove the contents.

14. Transport information

International Regulations

UN No. : —
Proper Shipping Name : —
Class : —
Sub Risk : —
Packing Group : —
Marine pollutant (Sea) : No
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code :

Japanese Regulations

Land Regulations Information : Obey Poisonous and Deleterious Substances Control Act and Fire Services Act regulations.
Maritime Regulations Information : Obey Ship Safety Law regulations.
Aviation Regulations Information : Obey the Civil Aeronautics Law.
Special Safety Measures : When transporting, avoid direct sunlight, load containers without damage, corrosion, or leakage, and securely prevent collapse of cargo.

15. Regulatory information (Japanese law)

There are not the applicable laws and ordinances.

16. Other Information

References, etc. :

GHS classification results database: NITE website
GHS model SDS information: JISHA website
Ministry of Health, Labor and Welfare website
Reagent guidebook
Collection of Poisonous Materials Standard Notifications
Dictionary of Chemistry (1987 30th printing: Kyoritsu Shuppan)
16112 Chemical Products (2012 The Chemical Daily)

*Caution:

Hazard and harmfulness evaluations were created using the data and information available at the current time, but is not necessarily thorough, so handle with care.

Further, the data and evaluations described herein are not in any way guaranteed. The descriptions refer to normal handling, so for special handling, first implement safety measures conforming to the new application and methods of use.

This SDS is translated into English.(Original version is Japanese)