

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020
BIS (BENZONITRILE) PD (II) CHLORIDE



Revision n. II of 29.11.2022
Replaces revision I of 21.07.2021

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

- 1.1 Product identifier**
Chemical name Bis (benzonitrile) palladium (II) chloride
Product code
CAS number 14220-64-5
EC number 238-085-3
Molecular weight 383,57 g/mol
Raw formula $C_{14}H_{10}Cl_2N_2Pd$
Commercial name BIS (BENZONITRILE) PD CHLORIDE
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Recommended uses Industrial use
Uses advised against Check section 15
- 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)
- 1.5 Registration number** A REACH registration number is not available for this substance as the annual quantity produced or imported is less than one tonne.

2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture according to Regulation (EC) n. 1272/2008

Hazard class	Category codes	Hazards indications
Acute Tox.	3	H301 Toxic if swallowed
Acute Tox.	3	H311 Toxic if on skin
Acute Tox.	2	H330 Fatal if inhaled

2.2 Label elements



Pictograms

Signal word

DANGER

Hazard statements

H301	Toxic if swallowed
H311	Toxic if on skin
H330	Fatal if inhaled

Precautionary advice

P270	Do not eat, drink or smoke when using this product
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P501	Dispose of contents/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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Bis (benzonitrile) palladium (II) chloride

CAS number 14220-64-5
 CE number 238-085-3
 INDEX number Not available
 M factor Not applicable
 ATE (oral) 100 mg/kg bw
 ATE (dermal) 300 mg/kg bw
 ATE (dust) 0.05 mg/L

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 immediately. If the person is unconscious, keep him stable on his side during transport. If not breathing, give artificial respiration.
Ingestion	Call a doctor immediately. Give water immediately (maximum of 2 glasses).
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:

- | | |
|---|-----|
| • Need to see a doctor immediately | YES |
| • Possibility of delayed effects following exposure | NO |

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- Move the exposed individual from the place of exposure to the open air YES
- Remove the clothing and shoes of the exposed individual YES
- How to handle contaminated clothing With gloves
- For those who take first care, wear PPE YES

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

Consult a doctor immediately.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media CO₂, powder or water spray. 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. If involved in a fire, the following may develop: carbon monoxide, hydrochloric acid, nitrogen oxides.

5.3 Advice for firefighters

Avoid breathing fumes. Prevent the water used to extinguish the fire from flowing into the sewer, groundwater or surface water.

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

Move away from the contaminated area immediately and keep to windward.

6.1.2. For emergency responders

Wear: Chemical risk gloves compliant with EN420 EN374 Standards

Complete clothing compliant with the UNI EN 13034: 2006 standard

Semi-face masks with ABEK2P3 R filters conforming to EN14387: 2004 + A1: 2008

6.2 Environmental precautions

Prevent infiltration into the sewer, groundwater and surface water. In case of penetration into the ground or infiltration of bodies of water, 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.

6.3.3 Other information

None.

6.4 Reference to other sections

None

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

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7.1.1. *Raccomentations 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*

Keep containers tightly closed in a cool and dry place

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

7.2. *Conditions 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*

Do not store along with oxidizing agents

7.2.2. *Containment of the effects of weather conditions, pressure, temperature, sunlight, humidity and vibrations*

Keep away from humidity, air and direct light.

7.2.3. *Conditions for keeping substances / mixtures intact*

Store in closed and labeled containers. Close the containers immediately after use.

7.2.4. *Provisions relating to ventilation, specific design of storage rooms or containers, quantitative limits in storage conditions, compatibility of packaging*

The storage rooms must be cool and dry. Store in an area without drains or access to sewers

7.3. *Specific end use(s)*

Industrial use

8. *EXPOSURE CONTROLS/PERSONAL PROTECTION*

8.1. *Control parameters (related to metallic Silver species)*

For this substance, the occupational and biological exposure limit values corresponding to the relative Community limit values referred to in Directives 98/24 / EC and 2004/37 / EC have not been established.

8.2. *Exposure controls*

8.2.1. *Appropriate engineering controls*

Use under a fume hood. Periodically check the range of the hood.

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

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

Skin protection (hands) Protective gloves in latex or nitrile rubber, compliant with EU Directive 89/89 / EEC and the resulting standards (EN374). The breakthrough time of the gloves must be ≥ 480 min and the thickness 0.11 mm.

Skin protection (body) Complete clothing compliant with UNI EN 13034: 2006 type 6

Respiratory protection Mask with P2 filters

Thermal hazards None

8.2.3. *Environmental exposure controls*

Maintain suction in all environments using localized collection systems and ambient air exchange. Convey the aspirated volumes to an abatement system and then into the

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atmosphere. Do not use recirculating air suction systems. Avoid any spillage into the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid
Color	Yellow
Odor	Odorless
Melting point / freezing point	266-283 ° C
Boiling point or initial boiling point and boiling range	Not applicable
Flammability	Not inflammable
Lower and upper explosive limits	Not explosive
Flash point	Not inflammable
Self-ignition temperature	Not inflammable
Decomposition temperature	Data not available
pH	Not defined
Cinematic viscosity	Not applicable
Solubility	Insoluble
Production coefficient n-octanol / water (logarithmic value)	Not applicable
Vapor pressure	Not applicable
Density and / or relative density	Data not available
Relative vapor density	Not applicable
Characteristics of the particles	Data not available

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

The product has catalytic properties

10.2 Chemical stability

The product is stable under normal conditions of use.

10.3 Possibility of hazardous reactions

None in particular

10.4 Conditions to avoid

Humidity

10.5 Incompatible materials

Oxidizing agents

10.6 Hazardous decomposition products

Carbon monoxide, hydrochloric acid, nitrogen oxides

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	The product is toxic if swallowed and in contact with the skin. Fatal if inhaled
Skin corrosion / irritation	Data not available
Serious eye damage/irritation	Data not available
Respiratory or skin sensitization	Data not available

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	Germ cell mutagenicity	Data not available	
	Carcinogenicity	Data not available	
	Reproductive toxicity	Data not available	
	STOT – single exposure	Data not available	
	STOT – repeated exposure	Based on the available data, the classification criteria are not met	
11.2	Information on other hazards		
	None		
12.	ECOLOGICAL INFORMATION		
12.1	Toxicity	Based on available data, the classification criteria are not met	
12.2	Persistence and degradability	No information available	
12.3	Bioaccumulative potential	No information available	
12.4	Mobility in soil	No information available	
12.5	Results of PBT and vPvB assessment	Not applicable	
12.6	Endocrine disrupting properties	No known effects	
12.7	Other adverse effects	None known	
13.	DISPOSAL CONSIDERATIONS		
13.1.	Waste treatment methods		
	The substance and its packaging must be disposed of as hazardous waste by authorized companies.		
14.	TRANSPORT INFORMATION		
14.1	UN number or ID number	UN2811	
14.2	UN proper shipping name	Toxic, solid, organic n.o.s.	
14.3	Transport hazard class(es)	6.1	
14.4	Packing group	II	
14.5	Environmental hazards	NO	
14.6	Special precautions for user	Use approved packaging	
14.7	Maritime transport in bulk according to IMO instruments	Not applicable	
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		NO
	Legislative Decree 81/2008 Consolidated Law on health and safety at work		YES
	Directive 2014/103 / EU "Adr"		NO
	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		NO
	https://echa.europa.eu/it/substances-restricted-under-reach		(check link)

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15.2 Chemical safety assessment

A chemical safety assessment was not carried out

16. OTHER INFORMATION

Changes compared to the previous edition

Regulatory amendment

Acronim and abbreviation legend

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

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstract Service

Main references and data sources

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

<http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

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

- Chemical Risk Training pursuant to Legislative Decree 81/08 Title IX dangerous substances
- PPE training