

**Safety data sheet**  
**According to Regulation n. 1907/2006 and Regulation 878/2020**  
**Bis(dibenzylidenacetone)palladium(0)**  
**Pd (DBA) 2**



Revision 5 – 10.10.2024  
 Replaces revision 4 - 29.11.2022

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

**1.1 Product identifier**

Chemical name	Bis(dibenzylidenacetone)palladium(0)
Product code	182
CAS number	32005-36-0
EC number	608-691-6
Molecular weight	575.0 g/mol
Raw formula	C <sub>34</sub> H <sub>28</sub> O <sub>2</sub> Pd
Commercial name	PD BIS (dibenzilideneacetone) Pd(DBA) <sub>2</sub>

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

Recommended uses	Industrial use. Catalyst for synthesis
Uses advised against	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)

**1.5 Registration number**

**2. HAZARDS IDENTIFICATION**

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

Hazard class	Category codes	Hazards indications
Skin sens.	1B	H317

**2.2 Label elements**

**Pictograms**



**Signal word**

**WARNING**

**Hazard statements**

H317

May cause an allergic skin reaction

**Precautionary advice**

P261

Avoid breathing dust / fume / gas / mist / vapors / spray.

P272

Contaminated work clothing should not be allowed out of the workplace

P280

Wear protective gloves / protective clothing / eye protection / face protection

P302+P352

In case of skin contact: wash with plenty of water and soap.

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P333-P313 If skin irritation or rash occurs: seek medical attention  
 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.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substance: Tris(dibenzilidenacetone)dipalladio**

CAS number: 32005-36-0  
 EC number: 608-691-6  
 REACH number: Not available  
 INDEX number: Not available  
 ATE: Not applicable  
 M factor (acute): Not applicable  
 M factor (chronic): Not applicable

**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. Make victim drink water (at least 2 glasses)  
 Contact with skin Remove contaminated clothing immediately. 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** YES
- **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 providing first aid, wear PPE** YES

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

May cause allergic skin reactions

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

If swallowed or inhaled, consult a doctor immediately.

**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

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Suitable extinguishing media      CO<sub>2</sub>, 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.

**5.3 Advice for firefighters**

General information      Prevent the water used to extinguish the fire from flowing into the sewer, groundwater or surface water.

Equipment      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 and keep upwind

**6.1.2. For emergency responders**

Wear:

Gloves for chemical risks compliant with EN420 EN374 Standards

Complete clothing compliant with the UNI EN 13034: 2006 standard

Mask with K-type filters compliant with EN14387: 2004 + A1: 2008

**6.2 Environmental precautions**

Prevent infiltration into the sewer, groundwater and surface water. In case of infiltration into bodies of water or sewers or in case of 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**

Disposal of contaminated material in accordance with point 13. Provide adequate ventilation.

**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**

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**

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**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 away from humidity and direct light.

**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**

Use ADR approved 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. Catalyst for synthesis

**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.

**DNEL**

No data available up to now

**PNEC**

No data available up to now

**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)** Chemical gloves according to EN 420 EN 374  
Glove material:

Natural latex

Material thickness: 0.5 mm

Penetration time: ≥ 60 min DIN EN374 method

**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 all environments under suction using localized collection systems and room air exchange. Convey the sucked volumes to a reduction system and then into the atmosphere. Do not use air recirculation suction systems. Avoid any spillage into the environment.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

Physical state

Dust

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Color	Bruno
Odor	Odorless
Melting point / freezing point	150 ° C
Boiling point or initial boiling point and boiling range	Not defined as the product decomposes
Flammability	Not inflammable
Lower and upper explosive limits	Not explosive
Flash point	Not inflammable
Self-ignition temperature	Not inflammable
Decomposition temperature	180 °C
pH	Not applicable
Cinematic viscosity	Not applicable
Solubility	Insoluble in water
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**

Reactions with strong oxidants

**10.4 Conditions to avoid**

Humidity

**10.5 Incompatible materials**

Oxidizing agents

**10.6 Hazardous decomposition products**

Carbon monoxide

**11**

**TOXICOLOGICAL INFORMATION**

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

**Acute toxicity**

Based on available data, the classification criteria are not met

**Skin corrosion / irritation**

Based on available data, the classification criteria are not met

**Serious eye damage/irritation**

Based on available data, the classification criteria are not met

**Respiratory or skin sensitization**

May cause allergic reactions

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met

**Carcinogenicity**

Based on available data, the classification criteria are not met

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	<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	
	<b>STOT – repeated exposure</b>	Based on available data, the classification criteria are not met	
	<b>Aspiration hazards</b>	No known effects	
<b>11.2</b>	<b>Information on other hazards</b>		
	None		
<b>12</b>	<b>ECOLOGICAL INFORMATION</b>		
<b>12.1</b>	<b>Toxicity</b>	Based on available data, the classification criteria are not met	
<b>12.2</b>	<b>Persistence and degradability</b>	Insoluble in water	
<b>12.3</b>	<b>Bioaccumulative potential</b>	No information available	
<b>12.4</b>	<b>Mobility in soil</b>	No information available	
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	Not applicable	
<b>12.6</b>	<b>Endocrine disrupting properties</b>	No known effects	
<b>12.7</b>	<b>Other adverse effects</b>	No known effects	
<b>13</b>	<b>DISPOSAL CONSIDERATIONS</b>		
<b>13.1</b>	<b>Waste treatment methods</b>	The substance and its packaging must be disposed of as hazardous waste by authorized companies.	
<b>14</b>	<b>TRANSPORT INFORMATION</b>		
<b>14.1</b>	<b>UN number or ID number</b>	n.a.	
<b>14.2</b>	<b>Official UN shipping name</b>	n.a.	
<b>14.3</b>	<b>Transport hazard class(es)</b>	n.a.	
	ADR/RID/IMDG/ICAO-IATA: Class:	n.a.	
	ADR/RID/IMDG/ICAO-IATA: Label:	n.a.	
	ADR: Tunnel restriction code	n.a.	
	IMDG - EmS:	n.a.	
<b>14.4</b>	<b>Packing group</b>	n.a.	
<b>14.5</b>	<b>Dangers for the environment</b>	n.a.	
	ADR/RID/ICAO-IATA:	n.a.	
	IMDG: Marine Contaminant:	n.a.	
<b>14.6</b>	<b>Special precautions for user</b>	n.a.	
<b>14.7</b>	<b>Maritime transport in bulk according to IMO instruments</b>		
	Bulk transport is not foreseen		
<b>15</b>	<b>REGULATORY INFORMATION</b>		
<b>15.1</b>	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>		<b>Applicability</b>
	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

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Directive 2014/103 / EU "Adr"	NO
<b>Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC)</b>	NO
<b>Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List</b>	NO
<b>Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List</b>	Limited use
<a href="https://echa.europa.eu/it/substances-restricted-under-reach">https://echa.europa.eu/it/substances-restricted-under-reach</a>	Item 75 (check link)

**15.2 Chemical safety assessment**

A chemical safety assessment was not carried out

**16 OTHER INFORMATION**

**Changes compared to the previous edition**

Changes to sections 1-2-8-9-11-12-14-16

**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

LC: lethal concentration

NOEC: no observed effect concentration

LOEC: lowest observed effect concentration

Bw: body weight

Koc: organic carbon-water partition coefficient

**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