

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020
Tris(dibenzylidenacetone)dipalladium(0)
Pd₂(DBA)₃



Revision n. 7 – 08.10.2024
 Replaces revision 6 – 02.04.2024

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

- 1.1 Product identifier**
 Chemical name Tris(dibenzylidenacetone)dipalladium(0)
 Product code 184
 CAS number 51364-51-3
 EC number 610-654-4
 Molecular weight 915.72 g/mol
 Brut formula C₅₁H₄₂O₃Pd₂
 Commercial name PD TRIS (dibenzylideneacetone)
- 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.
 Adress 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** Exempt under Article 6(1)

2. HAZARDS IDENTIFICATION

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

Hazard class	Category codes	Hazards indications
Skin corr.	1	H317
Aquatic Chronic (Fattore M: 1)	2	H411

2.2 Label elements

Pictograms



Signal word

WARNING

Hazard statements

H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects

Precautionary advice

P261	Avoid breathing dust / fume / gas / mist / vapors / spray.
P273	Avoid release to the environment
P280	Wear protective gloves / protective clothing / eye protection / face protection

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P302+P352 In case of skin contact: wash with plenty of water and soap.
 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	51364-51-3
EC number	610-654-4
REACH number	Not available
INDEX number	Exempt under Article 6(1)
ATE	Not applicable
M factor (acute)	Not applicable
M factor (chronic)	1

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. Don't dare to drink or eat.
Contact with skin	Remove contaminated clothing immediately Wash immediately with soap and water, rinsing thoroughly.
Contact with eyes	Rinse with plenty of running water for at least 15 minutes, keeping the eyelids open (remove contact lenses if this is easily possible). Consult an eye specialist.

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 who take first care, wear PPE** YES

4.2 Most important symptoms and effects, both acute and delayed

No known significant effects or criticalities

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 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

If heated, it can generate ammonia vapors. In the event of a fire, toxic fumes of nitrogen oxides or sulfur oxides may be formed.

5.3 Advice for firefighters

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

General information

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)

Equipment

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

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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

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)

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)

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

9. PHYSICAL AND CHEMICAL PROPERTIES

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9.1 Information on basic physical and chemical properties

Physical state	Crystalline powder
Color	Pale purple
Odor	Odorless
Melting point / freezing point	152 - 155 ° 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	Data not available
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

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	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	No known effects
11.2	Information on other hazards	
	None	
12.	ECOLOGICAL INFORMATION	
12.1	Toxicity	This substance is toxic to aquatic life with long lasting effects (self-classification)
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	No known effects
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	3077
14.2	Official UN shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3	Transport hazard class(es)	
	ADR/RID/IMDG/ICAO-IATA: Class:	9
	ADR/RID/IMDG/ICAO-IATA: Label:	9 Mark environmental hazard
	ADR: Tunnel restriction code	(-)
	IMDG - EmS:	F-A S-F
14.4	Packing group	III
14.5	Dangers for the environment	
	ADR/RID/ICAO-IATA:	Product dangerous for the environment
	IMDG: Marine Contaminant:	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.

14.7 Maritime transport in bulk according to IMO instruments

Bulk transport is not foreseen

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 1-3-8-11-12-14-16

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

LC: lethal concentration

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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:

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

16.5 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