



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12
Replaces revision n II del 2019.01.21

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

- 1.1 Product identifier**
- | | |
|------------------------|---------------------------------------|
| Chemical name | Palladium tetramino sulfate |
| Product codes | 180
1180 |
| C.A.S. Registry Number | 13601-06-4 |
| EC number | 426-980-3 |
| INDEX | Not available |
| Molecular weight | 269,99 |
| Brute formula | $\text{Pd}(\text{NH}_3)_4\text{SO}_4$ |
| Commercial name | Salt Pd sulfate |
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
- | | |
|----------------------|--------------------|
| Intended uses | Industrial use |
| Advised against uses | 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).

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Hazard classes	Category codes	Hazard statements
Toxic acute (STA: 500 mg/kg bw))	4	H302
Aquatic Acute (M factor: 1)	1	H400
Aquatic Chronic (M factor: 1)	1	H410

2.2 Label elements

Pictograms



Signal words WARNING

Hazard statements

H302
H400

Harmful if swallowed
Highly toxic to aquatic organisms

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12
Replaces revision n II del 2019.01.21

Precautionary statements	H410	Very toxic to aquatic life with long lasting effects.
	P270	Do not eat, drink or smoke during use
	P302+ P352	IF ON SKIN: Wash with plenty of soap and water.
	P304+ P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P312	Call a POISON CENTER or doctor/physician if you feel unwell.
	P280	Wear protective gloves / clothing. Protect eyes / face.
	P273	Avoid release to the environment

- 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 : Palladium tetramino sulfate

CAS number	13601-06-4
EC number	426-980-3
INDEX	Not available
ATE	500 mg/kg bw
M factor: acute	1
Factor M: 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. Do not give to drink or eat.

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12
Replaces revision n II del 2019.01.21

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:

- | | |
|--|-------------|
| | YES |
| • 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 | With gloves |
| • How to handle contaminated clothing | 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

Suitable extinguishing media CO2 or powder or water spray extinguishers. 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

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)



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12
Replaces revision n II del 2019.01.21

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

6.1.2. For emergency responders

Use :

Chemical risk gloves compliant with EN420 EN374 standards

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

Complete antacid clothing compliant with the UNI EN 13034: 2006 type 6 standard mask with K filters

6.2 Environmental precautions

In case of infiltration into bodies of water or sewers, notify the competent authorities.

In case of penetration into the ground, notify the competent authorities.

Prevent infiltration into the sewer, groundwater and surface water.

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. *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*

Store in original and labeled packaging. Use under suction. Close the jars immediately after use. Use is permitted only to trained and informed personnel.

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 for 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 protected from humidity and direct sunlight.

7.2.2. *Control of weather conditions, ambient pressure, temperature, sunlight, humidity, and vibration*

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12

Replaces revision n II del 2019.01.21

7.2.3. Conditions to maintain the integrity of the substance or mixture

Keep in closed and labeled containers

7.2.4. Advice regarding the ventilation, specific design for storage rooms or vessels, quantity limits under storage conditions, packaging compatibilities

Keep in closed and labeled containers

7.3. Specific end use(s)

Industrial use

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

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

Periodically check the range of the extractor hood

8.2.2. Individual protection measures, such as personal protective equipment

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

Skin protection (hands) Chemical risk gloves compliant with EN420 EN374 standards

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

Respiratory protection Semi-facial masks with P3 filters compliant with 14387: 2004 + A1: 2008 standards in the absence of technical measures to limit worker exposure

Thermal hazards The substance does not present thermal hazards

8.2.3. Environmental exposure controls

Maintain suction in all environments using localized collection and ambient air exchange systems. Convey the aspirated volumes to an abatement system and then into the atmosphere. Do not use recirculating air suction systems. Avoid any spill into the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state Crystalline powder

Colour Pale yellow

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12

Replaces revision n II del 2019.01.21

Odour	Odorless
Melting point/freezing point	It decomposes at about 80 ° C
Boiling point or initial boiling point and boiling range	Not applicable
Flammability	Not inflammable
Lower and upper explosion limit	Not explosive
Flash point	Not inflammable
Auto-ignition temperature	Not inflammable
Decomposition temperature	About 80 ° C
pH	Data not available
Kinematic viscosity	Not applicable
Solubility	Insoluble in water
Partition coefficient n-octanol/water (log value)	Not applicable
Vapour pressure	Not applicable
Density and/or relative density	
Relative vapour density	Not applicable
Particle characteristics	Data not available

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

The substance reacts violently to heat with strong reducing agents

10.2 Chemical stability

The product is stable under normal conditions

10.3 Possibility of hazardous reactions

There are no relevant information

10.4 Conditions to avoid

Information not available

10.5 Incompatible materials



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12

Replaces revision n II del 2019.01.21

	Strong reducing agents	
10.6	Hazardous decomposition products	
	Ammonia, nitrogen oxides, sulfur oxides	
11.	TOXICOLOGICAL INFORMATION	
11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Acute toxicity	Oral LD50 2704 mg / kg bw (rat)
	Skin corrosion / irritation	It can have irritating effects
	Serious eye damage/irritation	Causes severe eye damage
	Respiratory or skin sensitization	It can 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
	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
11.2	Information on other hazards	
	None	
12.	ECOLOGICAL INFORMATION	
12.1	Toxicity	Chronic toxicity 96 hour LC50 (for fish) \leq 1 mg / l and / or 48 hour EC50 (for crustaceans) \leq 1 mg / l and / or 72 or 96 hour EC50 (for algae and other aquatic plants) \leq 1 mg / l. Chronic toxicity 96 hour LC50 (for fish) \leq 1 mg / l and / or 48 hour EC50 (for crustaceans) \leq 1 mg / l and / or 72 or 96 hour CrE50 (for algae and other aquatic plants) \leq 1 mg / l

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12
 Replaces revision n II del 2019.01.21

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	Not know effect
12.7	Other adverse effects	No information available
13.	DISPOSAL CONSIDERATIONS	
13.1.	Waste treatment methods	
	The substance and its packaging must be disposed of as hazardous waste and delivered to authorized companies.	
14.	TRANSPORT INFORMATION	
14.1	UN number or ID number	3077
14.2	UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Palladium tetramino sulfate)
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental hazards	YES
14.6	Special precautions for user	Approved packaging
14.7	Maritime transport in bulk according to IMO instruments	Not applicable
15.	REGULATORY INFORMATION	
	Safety, health and environmental regulations/legislation specific for the substance or mixture	Applicability
15.1	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
15.2	Chemical safety assessment	
	A chemical safety assessment was not carried out	

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020



SALT Pd SULPHATE
Palladium tetramino sulfate

Revision n. III of 2021.10.12

Replaces revision n II del 2019.01.21

16. OTHER INFORMATION

16.1 Changes compared to the previous edition

Regulatory update

16.2 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

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

Training on Chemical Risk pursuant to Legislative Decree 81/08 Title IX dangerous substances

DPI training