

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



Revision 4 – 07.01.2025
 Replaces revision 3 - 29.11.2022

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

1.1 Product identifier

Chemical name	Platinum Oxide (IV)
Product code	90
Registration number	Exempt under Article 6(1)
C.A.S. Registry Number	1314-15-4
EC Number	215-223-0
Molecular weight	227.1 g/mol
Raw formula	PtO ₂

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

Industrial Sector	Additive for galvanic baths. 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).

01-2120140175-66-XXXX

2. HAZARDS IDENTIFICATION

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

Hazard class	Category codes	Hazards indications
Ox. Sol.	1	H271

2.2 Label elements

Pictograms		
Signal word	DANGER	
Hazard statements	H271	May cause fire or an explosion; very combustible
Precautionary advice	P210	Keep away from heat sources / sparks, open flames / heated surfaces. Not smoking
	P220	Keep away from clothing and other combustible materials
	P283	Wear fully flame retardant clothing or flame retardant fabrics.
	P306+P360	IN CASE OF CONTACT WITH CLOTHING: Rinse

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immediately and abundantly contaminated clothing and skin before removing clothing.

In the event of a major fire and large quantities: Evacuate the area. Risk of explosion. Use extinguishing media from a great distance.

Store separately

P371+P380+P375
 P420

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: Platinum Oxide

CAS Number	1314-15-4
EC Number	215-223-0
INDEX number	Not available
ATE	LD50 3400 mg/kg bw (rat)
M factor (acute)	Not applicable
M factor (chronic)	Not applicable

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Take to fresh air immediately. If breathing is difficult, give oxygen. Artificial respiration if necessary.
Ingestion	Wash the injured person's mouth. Do not give milk or alcoholic beverages. Call a doctor immediately.
Contact with skin	Remove contaminated clothing and wash thoroughly with plenty of water and neutral soap. Call a doctor immediately.
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). Call a doctor immediately.

Recommendations:

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

4.2 Most important symptoms and effects, both acute and delayed

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Not known effect

4.3 Indication of any immediate medical attention and special treatment needed

It is necessary to seek immediate medical attention

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media CO₂, powder or water spray extinguishers

Unsuitable extinguishing media High pressure water jets

5.2 Special hazards arising from the substance or mixture

Although the substance or mixture is not combustible, it can cause or promote the combustion of other materials.

5.3 Advice for firefighters

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).

Protective measures to be taken:

Remove the containers from the fire area, if this is possible without risk, or cool them, since if the substance is exposed to thermal radiation or if it is directly involved it can give rise to toxic fumes and explosions.

Damaged containers must only be handled by authorized skilled personnel.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Evacuate contaminated area

6.1.2. For emergency responders

Wear protective equipment (gloves and protective anti-acid clothing and protective means for the eyes).

Provide adequate ventilation of the premises.

Whenever possible, operate upwind.

Avoid coming into contact with the substance or handling the containers without adequate protection.

Isolate the area until the substance is completely dispersed.

6.2 Environmental precautions

Evacuate the dangerous area and minimize the affected area by containing the leak. Collect the material and store it in a suitable container pending disposal. Avoid the formation of dust.

6.3 Methods and material for containment and cleaning up

6.3.1. Advice in order to contain a spill

Limit the spreading with sand, bentonite or similar. Do not use sawdust or other flammable materials.

6.3.2. Advice in order to clean-up a spill

Wash contaminated area with water

6.3.3 Other information

None

6.4 Reference to other sections

None

7. HANDLING AND STORAGE

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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*

Use substance only with adequate ventilation and aspiration and with emergency eye wash nearby.

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*

Keep in sealed and labeled containers, separately or only with other oxidizing substances and away from sources of heat and ignition.

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

Store in a cool, well-ventilated place and away from sunlight.

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

Keep in a cool and dry place

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

The storage rooms must be ventilated and dry.

7.3. Specific end use(s)

Industrial use. Catalyst for synthesis.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

DNEL

No risks identified for workers and the general population

PNEC

No danger identified for the environment

8.2. Exposure controls

Use only in rooms equipped with fume hoods

8.2.1. *Appropriate engineering controls*

Use only in rooms equipped with fume hoods

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

Eye/face protection

Protective equipment for eyes 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: 0.11 mm

Penetration time: ≥ 60 min DIN EN374 method

Skin protection (body)

Protective and antacid clothing compliant with UNI EN 13034: 2006 type 6 standards

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Respiratory protection	Mask with ABEK P3 filters or self-contained breathing apparatus
Thermal hazards	Protective clothing compliant with UNI EN ISO 11612: 2009 A1-B1-C1-E1

8.2.3. Environmental exposure controls

Keep all environments where platinum oxide is used in suction, 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 spill into the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid powder
Color	Red brown
Odor	Odorless
Melting point / freezing point	450 ° 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 applicable
Self-ignition temperature	Not applicable
Decomposition temperature	It does not decompose
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	11.8 g / cm ³
Relative vapor density	Not applicable
Characteristics of the particles	<100 µm: 99.4%

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

It can cause fire or explosion; strong oxidant

10.2 Chemical stability

The product is stable under normal circumstances

10.3 Possibility of hazardous reactions

Nessuna nelle normali condizioni di utilizzo

10.4 Conditions to avoid

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	None in particular	
10.5	Incompatible materials Materiali infiammabili	
10.6	Hazardous decomposition products None	
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 LD50 3400 mg / kg bw (rat)
	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	Based on available data, the classification criteria are not met
	Germ cell mutagenicity	Based on available data, the classification criteria are not met
	Carcinogenicity	Data not available
	Reproductive toxicity	Data not available
	STOT – single exposure	Based on available data, the classification criteria are not met
	STOT – repeated exposure	Data not available
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	The substance is not subject to breakdown by any natural enzymatic or chemical process
12.3	Bioaccumulative potential	Not applicable
12.4	Mobility in soil	Data not available
12.5	Results of PBT and vPvB assessment	Not PBT nor vPvB
12.6	Endocrine disrupting properties	None known
12.7	Other adverse effects	None known
13.	DISPOSAL CONSIDERATIONS	
13.1.	Waste treatment methods Dispose of both the substance and its packaging as hazardous waste and deliver them to an authorized facility.	
14.	TRANSPORT INFORMATION	
14.1	UN number or ID number	UN 1479
14.2	Official UN shipping name	Oxidising solid, n.o.s. (platinum oxide)
14.3	Transport hazard class(es)	5.1

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	ADR/RID/IMDG/ICAO-IATA: Class:	5.1	
	ADR/RID/IMDG/ICAO-IATA: Label:	5.1	
	ADR: Tunnel restriction code	(E)	
	IMDG - EmS:	F-A S-Q	
14.4	Packing group	II	
14.5	Dangers for the environment		
	ADR/RID/ICAO-IATA:	no	
	IMDG: Marine Contaminant:	no	
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 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
	R.D. 09/01/1927 "Toxic gases"		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		NO
	https://echa.europa.eu/it/substances-restricted-under-reach		(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: 1-8-14-16		
	Acronim and abbreviation legend		
	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road		

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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:

<https://chem.echa.europa.eu/>

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