Platinum oxide (PtO2) (cas 1314-15-4) MSDS

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

1.1 Product identifiers

Product name : Platinum(IV) oxide
Product Number : 459925
Brand : 
CAS-No. : 1314-15-4

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

Identified uses : Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
- Oxidizing solids (Category 2)
- Eye irritation (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
- Contact with combustible material may cause fire. Irritating to eyes.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram
- Danger

Signal word

Hazard statement(s)
- H272 : May intensify fire; oxidiser.
- H319 : Causes serious eye irritation.

Precautionary statement(s)
- P220 : Keep/Store away from clothing/ combustible materials.
- P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements
- none


Hazard symbol(s)
- 

R-phrase(s)
- R8 : Contact with combustible material may cause fire.
- R36 : Irritating to eyes.

S-phrase(s)
- S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Adam’s catalyst
Formula : O2Pt
Molecular Weight : 227.08 g/mol
Component

Platinum dioxide
CAS-No. : 1314-15-4
EC-No. : 215-223-0
4. **FIRST AID MEASURES**

4.1 **Description of first aid measures**

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

4.3 **Indication of any immediate medical attention and special treatment needed**
No data available

5. **FIREFIGHTING MEASURES**

5.1 **Extinguishing media**

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 **Special hazards arising from the substance or mixture**
No data available

5.3 **Advice for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 **Further information**
Use water spray to cool unopened containers.

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6. **ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 **Environmental precautions**
Do not let product enter drains.

6.3 **Methods and materials for containment and cleaning up**
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 **Reference to other sections**
For disposal see section 13.

7. **HANDLING AND STORAGE**

7.1 **Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition. No smoking. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

7.2 **Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 **Specific end uses**
No data available

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 **Control parameters**

8.2 **Exposure controls**

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested
and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**
Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. **PHYSICAL AND CHEMICAL PROPERTIES**

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

a) Appearance
Form: solid

b) Odour
no data available

c) Odour Threshold
no data available

d) pH
no data available

e) Melting point/freezing point
Melting point/range: 450 °C - lit.

f) Initial boiling point and boiling range
no data available

g) Flash point
not applicable

h) Evaporation rate
no data available

i) Flammability (solid, gas)
no data available

j) Upper/lower flammability or explosive limits
no data available

k) Vapour pressure
no data available

l) Vapour density
no data available

m) Relative density
no data available

n) Water solubility
no data available

o) Partition coefficient: n-octanol/water
no data available

p) Autoignition temperature
no data available

q) Decomposition temperature
no data available

r) Viscosity
no data available

s) Explosive properties
no data available

t) Oxidizing properties
The substance or mixture is classified as oxidizing with the category 2.

9.2 **Other safety information**
no data available

10. **STABILITY AND REACTIVITY**

10.1 **Reactivity**
no data available

10.2 **Chemical stability**
no data available

10.3 **Possibility of hazardous reactions**
no data available

10.4 **Conditions to avoid**
no data available

10.5 **Incompatible materials**
Organic materials, Powdered metals

10.6 Hazardous decomposition products
no data available

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11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - rat - > 8.000 mg/kg

Skin corrosion/irritation
Skin - rabbit - No skin irritation

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes Causes serious eye irritation.

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no data available

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13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
14. **TRANSPORT INFORMATION**

14.1 **UN number**
ADR/RID: 1479  
IMDG: 1479  
IATA: 1479

14.2 **UN proper shipping name**
ADR/RID: OXIDIZING SOLID, N.O.S. (Platinum dioxide)
IMDG: OXIDIZING SOLID, N.O.S. (Platinum dioxide)
IATA: Oxidizing solid, n.o.s. (Platinum dioxide)

14.3 **Transport hazard class(es)**
ADR/RID: 5.1  
IMDG: 5.1  
IATA: 5.1

14.4 **Packaging group**
ADR/RID: II  
IMDG: II  
IATA: II

14.5 **Environmental hazards**
ADR/RID: yes  
IMDG: Marine pollutant: yes  
IATA: no

14.6 **Special precautions for user**
no data available

15. **REGULATORY INFORMATION**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture**
no data available

15.2 **Chemical Safety Assessment**
no data available

16. **OTHER INFORMATION**

**Further information**
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.