

## 1: Identification of substance / mixture

### 1. Product Identifier

Substance

Product Name **Silver (I) Oxide**  
Product Code 044724  
CAS Number 20667-12-3  
Other Names  
IUPAC  
MFCD Number MFCD00003404  
EC/EINECS 243-957-1  
REACH Number Index-No

### 2. Relevant identified uses of the substance or mixture and uses advised against

Research and Development

### 3. Details of the supplier of the safety data sheet

Fluorochem Ltd  
Unit 14, Graphite Way  
Hadfield  
Derbyshire  
SK13 1QH  
UK

Telephone: +44(0)1457 860111  
Fax: +44(0)1457 892799  
Email: sds@fluorochem.co.uk



### 4. Emergency telephone number

+44(0)7855 268577 -

## 2. Hazards Identification

### 1. Classification of the substance or mixture

H271	Ox. Liq. 1	
H318	Eye Dam. 1	
H400	Aquatic Acute 1	
H410	Aquatic Chronic 1	

### 2. Label elements

Signal Word **Danger**



### Hazard Statements

H271	May cause fire or explosion; strong oxidiser.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Precautionary Phrases

P220	Keep/Store away from clothing/./combustible materials.
P273	Avoid release to the environment.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391	Collect spillage.
P501	Dispose of contents/container to in accordance with local regulation

### 3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

## 3. Composition / Information on Ingredients

## 1. Substances

Product Name	Hazards	Concentration
Silver (I) Oxide		
CAS Number: 20667-12-3 EC/EINECS: 243-957-1	H271, H318, H400, H410 Aquatic Acute 1, Aquatic Chronic 1, Eye Dam. 1, Ox. Liq. 1	<=100%

## 4. First Aid Measures

### 1. Description of first aid measures

<i>Skin Contact</i>	P306 + P360: IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
<i>Eye Contact</i>	P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<i>Ingestion</i>	Wash out mouth with water.
<i>Inhalation</i>	Remove casualty from exposure ensuring one's own safety whilst doing so.

### 2. Most important symptoms and effects

No symptoms.

### 3. Indication of any immediate medical attention

No additional measures required

## 5. Firefighting measures

### 1. Extinguishing Media

<i>Suitable</i>	Carbon dioxide. Dry chemical powder. Water.
<i>Unsuitable</i>	Do not use water with a full water jet

### 2. Special Hazards arising from the substance or mixture

In combustion toxic fumes may form.

### 3. Advice for Fire Fighters

Wear protective clothing to prevent contact with skin and eyes.  
Wear self-contained breathing apparatus.

## 6. Accidental Release Measures

### 1. Personal Precautions

Refer to section 8 of SDS for personal protection details.

### 2. Environmental Precautions

Do not discharge into drains or rivers.

### 3. Methods & Materials

P391: Collect spillage.  
Mix with sand or vermiculite.  
Transfer to a suitable container.

### 4. Preventing the occurrence of secondary hazards.

No Special Measures Required

## 7. Handling and Storage

### 1. Personal Precautions

<i>Safe Handling</i>	Handle in fume hood. Wash hands immediately after contamination. P273: Avoid release to the environment.
<i>Protection against explosions and fires</i>	P220: Keep/Store away from clothing/./combustible materials. normal measures for preventive fire protection

### 2. Conditions for safe storage, including any incompatibilities

<i>Managing Storage Risks</i>	Keep container tightly closed. Store in cool, well ventilated area.
<i>Storage Controls</i>	No special requirements
<i>Maintaining Integrity</i>	P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep in tightly closed container in cool area away from direct sunlight or heat sources.
<i>Other advice</i>	No further information available.

### 3. Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

## 8. Exposure Controls/Personal Protection

### 1. Control Parameters

No Data Available

### 2. Exposure Controls

<i>General protective and hygiene measures</i>	P280: Wear protective gloves/protective clothing/eye protection/face protection. The standard precautionary measures should be adhered to when handling Wash hands during breaks and at the end of handling the material Immediately remove any contaminated clothing
<i>Engineering measures</i>	Ensure there is sufficient ventilation of the area.
<i>Eye / Face Protection</i>	Safety Glasses.
<i>Hand protection</i>	Protective gloves.
<i>Respiratory protection</i>	Respiratory protection not required.
<i>Skin protection</i>	Protective clothing.
<i>Other personal protection advice</i>	no data

## 9. Physical and Chemical Properties

### 1. Physical and Chemical Properties

Appearance	Powder
Odour	Odourless
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	No Data Available
Initial boiling point and boiling range	No Data Available
Flash point	No Data Available
Evaporation rate	No Data Available
Flammability(solid,gas)	No Data Available

Upper/lower flammability or explosive limits	No Data Available
Vapour pressure	No Data Available
Vapour density	No Data Available
Relative density	7.143 g/cm <sup>3</sup>
Solubility(ies):	Dilute nitric acid. Ammonia
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive properties	No Data Available
Oxidising properties	No Data Available

## 2. Other Information

No additional information available

## 10. Stability and Reactivity

### 1. Reactivity

no unusual reactivity

### 2. Stability

Stable under normal conditions.

### 3. Possibility of Hazardous Reactions

no hazardous reactions known

### 4. Conditions to Avoid

Light sensitive

### 5. Incompatible Materials

Strong oxidizing agents.  
Strong acids.  
Amines.  
Ammonia

### 6. Hazardous Decomposition Products

In combustion emits toxic fumes.  
In combustion evolve silver/silver oxides.

## 11. Toxicology information

### 1. Information

<i>Acute Toxicity</i>	LD50 Oral - rat - 2,820 mg/kg
<i>Skin corrosion/irritation</i>	irritant for skin and mucous membranes
<i>Serious eye Damage/irritation</i>	irritant effect
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	not known
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	not known

### 2. Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

## 12. Ecological Information

### 1. Toxicity

not known

### 2. Persistence and degradability

not known

### 3. Bio-Accumulative Potential

not known

### 4. Mobility and Soil

not known

### 5. Results of PBT & vPvB assessment

not known

### 6. Other adverse effects

not known

## 13. Disposal Considerations

### 1. Waste Treatment Methods

*Disposal Operations* Consult state, local or national regulations for proper disposal.  
Hand over to authorised disposal company as hazardous waste.

*Disposal of Packaging* Disposal must be made according to official regulations.

## 14. Transport Information

### Air (ICAO)

1. **UN Number:** 1479
2. **Shipping Name:** Oxidizing solid, n.o.s.
3. **Transport hazard class(es):** : 5.1 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

### Road (ADR)

1. **UN Number:** 1479
2. **Shipping Name:** OXIDIZING SOLID, N.O.S (Silver (I) Oxide).
3. **Transport hazard class(es):** : 5 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

## Sea (IMDG)

1. **UN Number:** 1479  
2. **Shipping Name:** Oxidizing solid, n.o.s.  
3. **Transport hazard class(es):** : 5.1 Sub Class :



4. **Packing group:** II  
5. **Environmental hazards:**  
6. **Special Precautions for user:**  
7. **Transport in bulk:** IBCINS: IBC08  
IBCPCOV: B4, B21  
TANKPROV: TP33

## 15. Safety, health, environmental and national regulations

### 1. Safety, health, environmental and national regulations:

product is not subject to any additional regulations or provisions

### 2. Safety Assessment

No Chemical Safety Assessment

## 16. Other Information

### 1. Other Information:

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)  
RID:Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association  
ICAO:International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the ICAO  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CAS:Chemical Abstracts Service

### 2. Associated risk phrases according to European directive 67/548/EEC

### 3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.