

**Safety Data Sheet dated 11/4/2023, version 8**

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## **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### **1.1. Product identifier**

Identification of the substance

Trade name: B307 - SILVER OXIDE XP  
Trade code: B307  
CAS number: 20667-12-3  
EC number: 243-957-1  
REACH number: 01-2119513370-54

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

Recommended use:

Galvanic, base and lab chemistry

### **1.3. Details of the supplier of the safety data sheet**

Company:  
CABRO SPA - AREZZO  
Road Setteponti 141  
52100 - Italy  
CABRO SPA  
Phone n. +39 0575 984442  
Office hours: 9-13 / 14.30-17.30

Competent person responsible for the safety data sheet:

info@cabro.it

### **1.4. Emergency telephone number**

CABRO SPA  
Phone n. +39 0575 984442  
Office hours: 9-13 / 14.30-17.30  
Single European emergency number: 112  
Poison Information Center - 24/24h Foggia Hospital - Phone +39 0881-732326  
Poison Information Center - 24/24h Bergamo Hospital - Phone +39 800 883300

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## **SECTION 2: Hazards identification**

### **2.1. Classification of the substance or mixture**

EC regulation criteria 1272/2008 (CLP)

- ⚠ Danger, Ox. Sol. 1, May cause fire or explosion; strong oxidiser.
- ⚠ Danger, Eye Dam. 1, Causes serious eye damage.
- ⚠ Danger, Repr. 1B, May damage the unborn child.
- ⚠ Warning, Aquatic Acute 1, Very toxic to aquatic life.
- ⚠ Warning, Aquatic Chronic 1, Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

### **2.2. Label elements**

Hazard pictograms:



Danger

Hazard statements:

H271 May cause fire or explosion; strong oxidiser.  
H318 Causes serious eye damage.

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## B307 - SILVER OXIDE XP



H360D May damage the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

### Precautionary statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep away from clothing and other combustible materials.

P273 Avoid release to the environment.

P280 Wear protective gloves/clothing and eye/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER/doctor.

P370+P378 In case of fire, use a dry powder fire extinguisher to extinguish.

P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

P391 Collect spillage.

### Special Provisions:

None

### Contains

Disilver oxide

### Special provisions according to Annex XVII of REACH and subsequent amendments:

None

### 2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$

### Other Hazards:

No other hazards

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Identification of the substance

Chemical characterization: B307 - SILVER OXIDE XP

Trade code: B307

CAS number: 20667-12-3

EC number: 243-957-1

REACH number: 01-2119513370-54

| Qty   | Name           | Ident. Number   | Classification  |
|-------|----------------|---|---|
| 100 % | Disilver oxide | CAS: 20667-12-3<br>EC: 243-957-1<br>REACH No.: 01-2119513370-54 | 2.14/1 Ox. Sol. 1 H271<br>3.3/1 Eye Dam. 1 H318<br>3.7/1B Repr. 1B H360D<br>4.1/A1 Aquatic Acute 1 H400 M=100.<br>4.1/C1 Aquatic Chronic 1 H410 M=10. |

M factor:

M: 100

M (chronic): 10

**3.2. Mixtures**  
N.A.

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**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

In case of skin contact:

Immediately take off all contaminated clothing.  
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.  
**OBTAIN IMMEDIATE MEDICAL ATTENTION.**  
Wash thoroughly the body (shower or bath).  
Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.  
Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. **OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.**

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

**4.2. Most important symptoms and effects, both acute and delayed**  
None

**4.3. Indication of any immediate medical attention and special treatment needed**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).  
Treatment:  
None

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**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

Suitable extinguishing media:  
In case of fire, use a dry powder fire extinguisher to extinguish.  
Extinguishing media which must not be used for safety reasons:  
None in particular.

**5.2. Special hazards arising from the substance or mixture**

Do not inhale combustion gases  
Burning produces heavy smoke.

**5.3. Advice for firefighters**

Use suitable breathing apparatus .  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Move undamaged containers from immediate hazard area if it can be done safely.

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**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

For non emergency personnel:  
Wear personal protection equipment.  
Remove persons to safety.  
See protective measures under point 7 and 8.  
For emergency responders:  
Wear personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

**6.3. Methods and material for containment and cleaning up**

Wash with plenty of water.

**6.4. Reference to other sections**

See also section 8 and 13

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**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

**7.2. Conditions for safe storage, including any incompatibilities**

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

Keep away from combustible materials.

Instructions as regards storage premises:

Cool and adequately ventilated.

**7.3. Specific end use(s)**

None in particular

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**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

No occupational exposure limit available

DNEL Exposure Limit Values

Disilver oxide - CAS: 20667-12-3

Worker Industry: 600 µg/m<sup>3</sup> - Consumer: 150 µg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Industry: 0.22 mg/kg bw/day - Consumer: 0.11 - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Disilver oxide - CAS: 20667-12-3

Target: Fresh Water - Value: 40 ng/L

Target: Marine water - Value: 860 ng/L

Target: Sewage treatment plant - Value: 25 µg/l

Target: Freshwater sediments - Value: 438.13 mg/kg dwt

Target: Marine water sediments - Value: 438.13 mg/kg dwt

Target: Soil (agricultural) - Value: 1.41 mg/kg dwt

**8.2. Exposure controls**

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

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Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties  | Value  | Method: | Notes  |
|---|--|---------|--------|
| Physical state:   | Solid  | --      | Powder |
| Colour:   | Black  | --      | --     |
| Odour:  | odorless   | --      | --     |
| Melting point/freezing point:                             | N.A.   | --      | --     |
| Boiling point or initial boiling point and boiling range: | N.A.   | --      | --     |
| Flammability:   | It's capable of catching fire or being set on fire | --      | --     |
| Lower and upper explosion limit:                          | N.A.   | --      | --     |
| Flash point:  | N.A.   | --      | --     |
| Auto-ignition temperature:                                | N.A.   | --      | --     |
| Decomposition temperature:                                | N.A.   | --      | --     |
| pH:   | N.A.   | --      | --     |
| Kinematic viscosity:                                      | N.A.   | --      | --     |
| Solubility in water:                                      | N.A.   | --      | --     |
| Solubility in oil:  | N.A.   | --      | --     |
| Partition coefficient n-octanol/water (log value):        | N.A.   | --      | --     |
| Vapour pressure:  | N.A.   | --      | --     |

|                                  |      |    |    |
|----------------------------------|------|----|----|
| Density and/or relative density: | N.A. | -- | -- |
| Relative vapour density:         | N.A. | -- | -- |
| Particle characteristics:        |      |    |    |
| Particle size:                   | N.A. | -- | -- |

#### 9.2. Other information

| Properties   | Value | Method: | Notes |
|--------------|-------|---------|-------|
| Miscibility: | N.A.  | --      | --    |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

None

### 10.4. Conditions to avoid

Stable under normal conditions.

### 10.5. Incompatible materials

Avoid contact with combustible materials: the product may explode.

### 10.6. Hazardous decomposition products

None.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the substance:

B307 - SILVER OXIDE XP - CAS: 20667-12-3

#### a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

#### b) skin corrosion/irritation

Not classified

Based on available data, the classification criteria are not met

#### c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

#### d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

#### e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

#### f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

#### g) reproductive toxicity

The product is classified: Repr. 1B H360D

#### h) STOT-single exposure

- Not classified  
Based on available data, the classification criteria are not met
- i) STOT-repeated exposure  
Not classified  
Based on available data, the classification criteria are not met
- j) aspiration hazard  
Not classified  
Based on available data, the classification criteria are not met

**11.2. Information on other hazards**

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

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**SECTION 12: Ecological information**

**12.1. Toxicity**

Adopt good working practices, so that the product is not released into the environment.

B307 - SILVER OXIDE XP - CAS: 20667-12-3

The product is classified: Aquatic Acute 1 - H400; Aquatic Chronic 1 - H410

Disilver oxide - CAS: 20667-12-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1.2 µg/l - Duration h: 96

Endpoint: LC50 - Species: Invertebrates = 220 ng/L - Duration h: 48

**12.2. Persistence and degradability**

N.A.

**12.3. Bioaccumulative potential**

N.A.

**12.4. Mobility in soil**

N.A.

**12.5. Results of PBT and vPvB assessment**

vPvB Substances: None - PBT Substances: None

**12.6. Endocrine disrupting properties**

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

**12.7. Other adverse effects**

None

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**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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**SECTION 14: Transport information**



**14.1. UN number or ID number**

ADR-UN Number: 1479

IATA-UN Number: 1479

IMDG-UN Number: 1479

**14.2. UN proper shipping name**

ADR-Shipping Name: OXIDIZING SOLID, N.O.S.(Disilver oxide)

IATA-Shipping Name: OXIDIZING SOLID, N.O.S.(Disilver oxide)

IMDG-Shipping Name: OXIDIZING SOLID, N.O.S.(Disilver oxide)

**14.3. Transport hazard class(es)**

ADR-Class: 5.1  
ADR - Hazard identification number: -  
IATA-Class: 5.1  
IATA-Label: 5.1  
IMDG-Class: 5.1

**14.4. Packing group**

ADR-Packing Group: I  
IATA-Packing group: I  
IMDG-Packing group: I

**14.5. Environmental hazards**

ADR-Environmental Pollutant: Yes  
IMDG-Marine pollutant: Marine Pollutant  
Most important toxic component: Disilver oxide  
IMDG-EmS: F-A,  
S-Q

**14.6. Special precautions for user**

ADR-Subsidiary hazards: -  
ADR-S.P.: 274  
ADR-Transport category (Tunnel restriction code): 1 (E)  
IATA-Passenger Aircraft: 557  
IATA-Subsidiary hazards: -  
IATA-Cargo Aircraft: 561  
IATA-S.P.: A3 A803  
IATA-ERG: 5L  
IMDG-Subsidiary hazards: -  
IMDG-Stowage and handling: Category D  
IMDG-Segregation: SG38 SG49 SG60 SG61

**14.7. Maritime transport in bulk according to IMO instruments**

N.A.

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**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
Regulation (EU) n. 2020/878  
Regulation (EU) n. 286/2011 (ATP 2 CLP)  
Regulation (EU) n. 618/2012 (ATP 3 CLP)  
Regulation (EU) n. 487/2013 (ATP 4 CLP)  
Regulation (EU) n. 944/2013 (ATP 5 CLP)  
Regulation (EU) n. 605/2014 (ATP 6 CLP)  
Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
Regulation (EU) n. 2016/918 (ATP 8 CLP)  
Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
Regulation (EU) n. 2017/776 (ATP 10 CLP)  
Regulation (EU) n. 2018/669 (ATP 11 CLP)  
Regulation (EU) n. 2018/1480 (ATP 13 CLP)  
Regulation (EU) n. 2019/521 (ATP 12 CLP)  
Regulation (EU) n. 2020/217 (ATP 14 CLP)  
Regulation (EU) n. 2020/1182 (ATP 15 CLP)  
Regulation (EU) n. 2021/643 (ATP 16 CLP)  
Regulation (EU) n. 2021/849 (ATP 17 CLP)



Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: P8, E1

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the substance.

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### SECTION 16: Other information

Full text of phrases referred to in Section 3:

H271 May cause fire or explosion; strong oxidiser.

H318 Causes serious eye damage.

H360D May damage the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

| Hazard class and hazard category | Code   | Description                                    |
|----------------------------------|--------|--|
| Ox. Sol. 1                       | 2.14/1 | Oxidising solid, Category 1                    |
| Eye Dam. 1                       | 3.3/1  | Serious eye damage, Category 1                 |
| Repr. 1B                         | 3.7/1B | Reproductive toxicity, Category 1B             |
| Aquatic Acute 1                  | 4.1/A1 | Acute aquatic hazard, category 1               |
| Aquatic Chronic 1                | 4.1/C1 | Chronic (long term) aquatic hazard, category 1 |

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

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