

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name: Silvered Cobaltous/ic Oxide Combustion Reagent, OEA
Catalogue no: R12050
SDS reference no: R12050
Brand: OEA Labs
EC index no(s): Co3O4 [215-157-2] Ag[231-131-3]
REACH no: The annual tonnage does not require registration.
CAS no(s): Co3O4 [1308-06-1] Ag [7440-22-4]

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

Identified uses: Elemental analysis scientific instrumentation. Primary use as an oxygen donor catalyst and absorbent for halogens and sulphur in combustion/reaction tubes for nitrogen, carbon, hydrogen, and sulphur configured applications. Not for domestic uses.

1.3 Details of the supplier of the safety data sheet

Company name: OEA Laboratories Limited
 Unit C2 Florence Road Business Park
 Kelly Bray, Callington, Cornwall
 PL17 8EX, United Kingdom

Telephone: +44 (0)1579 384174
Fax: +44 (0)1579 384174
Email: sales@oealabs.com

1.4 Emergency telephone number

Telephone: +44 (0)1579 384174, +44 (0) 1579 350212, +44 (0) 7811 102906

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture according to Regulation (EC) No 1272/2008

Carcinogenicity, inhalation (Category 1A), H350i
 Skin corrosion/irritation (Category 1), H317
 Carcinogenicity (Category 2), H351

2.2 Labelling elements according to Regulation (EC) No 1272/2008

Pictogram(s):   GHS08

Signal word: Danger

Hazard statement(s):

H350i May cause cancer by inhalation.
 H317 May cause an allergic skin reaction.
 H351 Suspected of causing cancer.

Precautionary statement(s):

P201 Obtain special instructions before use.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 Restricted to professional users.

2.2 Other hazards

None

SECTION 3. Composition/information of ingredients

3.1 Substances

Synonyms: Tricobalt tetraoxide
Formula: Co3O4 + Ag
Molecular weight: 240.80g/mol

Components:

Cobalt (II,III) Oxide Concentration: 80 to 95%

CAS No 1308-06-1, EC No 215-157-2, H350i, Carcinogenicity, inhalation, Category 1A; H317, Skin corrosion/irritation, Category 1; H351, Carcinogenicity, Category 2;

Silver Concentration: 5 to 20%

CAS No 7440-22-4, EC No 231-131-3, -, Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008, ;

SECTION 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:

Flush eyes with water as a precaution.

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

The most important known symptoms and effects are described in the labelling (Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 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

Cobalt/cobalt oxides Silver/silver oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange for disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For safe handling see Section 7. For disposal see Section 13. For personal protection equipment see Section 8.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation of the workplace. Avoid contact with eyes and skin. Avoid formation of dust, vapours and aerosols. Follow normal measures for fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly sealed. Store in a cool, dry place.

7.3 Specific end uses

Apart from uses mentioned in Section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters:

Cobalt (II,III) Oxide

CAS No 1308-06-1, TWA, 0.1mg/m³, UK, EH40 WEL

Silver

CAS No 7440-22-4, Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008; TWA, 0.1mg/m³, UK, EH40 WEL

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 the workday.

Personal protective equipment:

Eye/face protection:

Safety glasses with side shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(US) or EN166.

Skin protection:

Handle with gloves to specification EU Directive 89/686/EEC and EN374. Inspect prior to use. Use proper glove removal practice to avoid contact with product. Wash and dry hands.

Body protection:

Complete suit protection against chemicals. The type of protective equipment must be selected according to the concentration and amount of 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 (EN143) respirators 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).

Environmental protection:

Prevent further leakage or spillage if safe to do so. Do not let the product enter drains. Discharge into the environment must be avoided.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form:	Granules
Colour:	Grey/black
Odour:	No data available
Odour threshold:	No data available
pH:	No data available
Melting point:	895°C
Boiling point:	No data available
Flash point:	Not applicable
Flammability solid/gas:	No data available
Upper/lower flammability or explosive limits:	No data available
Water solubility:	Insoluble
Autoignition temp:	No data available
Decomp temperature:	>900°C
Explosive properties:	No data available
Oxidising properties:	No data available

9.2 Other safety information

No data available

SECTION 10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid moisture

10.5 Incompatible materials

Reducing agents

10.6 Hazardous decomposition products

No data available. In the event of a fire see Section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - >5,000mg/kg - Nutritional and Gross Metabolic: Weight loss or decreased weight gain (tricobalt tetraoxide)
 LD50 Inhalation - rat - 4hr - >4830ppm (tricobalt tetraoxide)
 LD50 Oral - rat - male - >5,000mg/kg (silver)
 LD50 Dermal - rat - >2,000mg/kg

Skin corrosion/irritation:

Skin - rat - no skin irritation

Serious eye damage/eye irritation:

No data available

Respiratory or skin sensitisation:

No data available

Germ cell mutagenicity:

No data available

Carcinogenicity:

This product is or contains a component that has been reported to be a possible carcinogen based on its IARC,ACGIH, NTP or EPA classification.

Limited evidence of carcinogenicity in animal studies.

IARC: 1 - Group 1: Carcinogenic to humans (nickel monoxide)

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:

No data available

Potential health effects - ingestion:

No data available

Potential health effects - skin:

No data available

Potential health effects - eyes:

No data available

Signs and symptoms of exposure:

No data available

Additional information:

Effects due to ingestion may include: burning pain in mouth, throat or stomach. Prolonged or repeated exposure may cause: fatigue, cardiac irregularities, convulsions, vomiting

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish: LC50 - Danio rerio (zebra fish) - >136mg/l - 96hrs (tricobalt tetraoxide)

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (water flea) - >136mg/l - 48hrs (tricobalt tetraoxide)

Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (green algae) - 88mg/l - 72hrs (tricobalt tetraoxide)

Toxicity to bacteria: 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 as chemical safety assessment not required/not conducted

12.6 Other adverse effects

Harmful to aquatic life. No data available.

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Product:

Offer surplus and non-recyclable material to a licensed professional waste disposal company.

Contaminated packaging:

Dispose of as unused product.

SECTION 14. Transport information

14.1 UN number

ADR/RID/IATA/IMDG: Not dangerous goods

14.2 UN proper shipping name

ADR/RID/IATA/IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID/IATA/IMDG: Not dangerous goods

14.4 Packaging group

ADR/RID/IATA/IMDG: Not dangerous goods

14.5 Environmental hazards

ADR/RID/IATA/IMDG: Not dangerous goods

14.6 Special precautions for user

Not dangerous goods

14.7 Shipping quantities

ADR LQ maximum: Not dangerous goods

ADR EQ code: Not dangerous goods

ADR EQ IP/pkg: Not dangerous goods

IATA LQ PInstruction: Not dangerous goods

IATA LQ IP/pkg: Not dangerous goods

IATA EQ code: Not dangerous goods

IATA EQ IP/pkg: Not dangerous goods

De minimus: Not dangerous goods

SECTION 15. Regulatory information

This safety data sheet 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

For this product a chemical safety assessment was not carried out.

SECTION 16 Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used as a guide. The information in this document is based on the present 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. OEA Laboratories Limited shall not be held liable for any damage resulting from the handling or contact with the above product. See www.oealabs.com for terms and conditions of sale.