

SECTION1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:
OKCLCOLORREF, Secondary color reference, color Ref1, color Ref2, color Ref3. (Chlorine free)
Product number:
01X274807, 01X344312, 01X344312, 01X344314

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

No further relevant information available.
Application of the substance / the preparation:
Reagent for colorimeter analysis

1.3 Details of the supplier of the safety data sheet

Company name:
Thermo Fisher Scientific, Inc
Blk 55, Ayer Rajah Crescent, #04-16/24, Singapore 139949,
Website: www.eutechinst.com
Email: eutech@thermofisher.com
Telephone number: (65) 6778 6876.
Fax number: (65) 6773 0836.

1.4 Emergency telephone number

CHEMTREC 24 HR Emergency: SINGAPORE: 800-101-2201 International: +1 703-741-5970

SECTION2. Hazards identification

2.1 Classification of the substance or mixture

GHS Classification
Skin corrosion. (Category 2) H314
Eye damage. (Category 2) H318
Respiratory sensitization. (Category 1)
Skin sensitization. (Category 1)
Carcinogenicity. (Category 1B)
Reproductive toxicity. (Category 1B)
Acute aquatic toxicity. (Category 3)

2.2 Label elements

Hazard pictograms



Signal word

Danger

Hazard statements

H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage
H334: may cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergy skin reaction.
H350: May cause cancer.
H360: May damage fertility or the unborn child
H412: Harmful to aquatic life with long lasting effects

Precautionary statement(s)


P260: Do not breathe mist, vapours, spray
P264: Wash skin thoroughly after handling.
P280: Wear protective gloves / protective clothing / eye protection / face protection.

SECTION3. Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Description: Mixture of contains organic and inorganic compounds.

Dangerous Components:		Weight %
CAS: 7791-13-1, EC-No: 231-589-4	Cobalt II chloride  Acute toxicity, Oral: cat 4, H302 harmful if swallowed. Skin corrosion: cat 1, Serious eye damage: cat 1, H314 Causes severe skin burns and eye damage. Respiratory sensitization: cat 1, H334 may cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin sensitization: cat 1, H317 May cause an allergy skin reaction. Carcinogenicity: cat 1B, H350, May cause cancer. Reproductive toxicity: cat 1B, H360 May damage fertility or the unborn child Acute aquatic toxicity: cat 1, H400, very toxic to aquatic life.	2.4%
CAS: 7732-18-5, EC-No: 231-791-2	Deionized water	97.6%

SECTION4. First aid measures

4.1 Description of first aid measures

General information. Instantly remove any clothing soiled by the product.

Inhalation:

Move victim to fresh air. In case of respiratory difficulties seek medical attention.

Skin contact:

Instantly wash with water and soap and rinse thoroughly.

Eye contact:

Rinse opened eye for several minutes under running water (at least 15 minutes).

If symptoms persist, consult doctor

Ingestion:

Rinse mouth with water, In case of persistent symptoms consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

Material is destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION5. Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing agents:Use fire fighting measures that suit the environment.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

Hydrogen chloride gas

5.3 Advice for firefighters**Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

Additional information

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Ambient fire may liberate hazardous vapours.

SECTION6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:

Collect mechanically.

Ensure adequate ventilation.

Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections:

No dangerous materials are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION7. Handling and storage**7.1 precautions for safe handling**

Avoid exposure. Avoid formation of dust and aerosols. Avoid contact with skin and eyes.

Information about protection against explosions and fires:

The product is not flammable.

7.2 Conditions for safe storage, including any incompatibilities**Storage****Requirements to be met by storerooms and containers:**

Store in cool location.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Protect from heat and direct sunlight.

Store under dry conditions.

Protect from humidity and keep away from water.

Protect from the effects of light.

Recommended storage temperature:

20 °C +/- 5 °C

7.3 Specific end use(s)

No further relevant information available.

SECTION8. Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

8.1 Control parameters

Components with limit values that require monitoring at the workplace.	
Cobalt dichloride hexahydrate cas-no 7791-13-1	
Basis Singapore. Workplace Safety and Health Act-First schedule permissible exposure limits of toxic substances.	Long-term value: 0.02 mg/m ³

Additional information: The lists that valid during the compilation were used as basis.

8.2 Exposure controls

Personal protective equipment: Safety glasses. Gloves.

**Material Of gloves**

Nitrile rubber, NBR

Recommended thickness of the material:≥ 0.11 mm

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level ≥ 1 (>10 min)

Eye protection:

Safety glasses

use against the effects of fumes / dust

Body protection:

Protective work clothing.

SECTION9. Physical and chemical properties

9.1 Information on basic physical and chemical properties	
Appearance:	
Form:	liquid
colour:	Not determined
Odour:	Odourless
Odour threshold:	Not determined
pH-value at 20 °C:	Not determined
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Inflammability (solid, gaseous)	
Danger Of explosion:	Product is not explosive.
Critical values for explosion	
Lower:	Not determined
Upper:	Not determined
Density:	Not determined
Relative density	Not determined
Vapour density	Not applicable
Evaporation rate	Not applicable
Solubility in / Miscibility with	
Water:	Soluble
Segregation coefficient (n-octanol/water):	Not determined
Viscosity:	
Dynamic:	Not applicable
kinematic	Not applicable
Solvent content:	
Organic solvents:	Not applicable
Solids content:	Not applicable

9.2 Other information

No further relevant information available

SECTION10. Stability and reactivity

Reactivity

Thermal decomposition /conditions to be avoided:

To avoid thermal decomposition do not overheat.

Conditions to avoid:

Exposure.

Incompatible materials:

Alkali metals

Oxidizing agents.

Hazardous decomposition products:

No data available.

SECTION11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Quantitative data on ne toxicity of the preparation are not available.

Primary irritant effect:

on the skin:

No data available.

on the eye:

No data available.

Sensitization:

May cause allergic respiratory and skin reactions.

Additional toxicological information:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity

No data available

Carcinogenicity

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

Reproductive toxicity

Presumed human reproductive toxicant.

SECTION12. Ecological information

12.1 Toxicity

Aquatic toxicity:

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

Other information:

Quantitative data on the ecological effect of this are not available.

Behaviour in environmental systems:

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Toxic to aquatic life.

SECTION13. Disposal considerations**13.1 Waste treatment methods****Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleanedpackagings:**Recommendation:**

Disposal must be made according to official regulations.

Recommended cleaning agent:

Water, if necessary with cleaning agent.

SECTION14. Transport information

14.1 UN-Number ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es) ADR, ADN, IMDG, IATA Class	Void
14.4 Packing group ADR, IMDG, IATA	Void
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code	Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.

SECTION15. Regulatory information**15.4 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

Information about limitation of use: **Not required.**

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16. Other information**Abbreviations and acronyms:**

CAS - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical substances/EU List of Notified Chemical Substances

NLP - EU No Longer Polymers

IECSC - Chinese Inventory of Existing Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

WEL - Workplace Exposure Limit

TWA - Time Weighted Average

DNEL - Derived No Effect Level

PNEC - Predicted No Effect Concentration

NOEC - No Observed Effect Concentration

RPE - Respiratory Protective Equipment

LD50 - Lethal Dose 50%

LC50 - Lethal Concentration 50%

EC50 - Effective Concentration 50%

ATE - Acute Toxicity Estimate

POW - Partition coefficient Octanol:Water

PBT - Persistent, Bioaccumulative, Toxic

vPvB - very Persistent, very Bioaccumulative

BCF - Bioconcentration factor

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - United States Occupational Safety and Health Administration

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

NFPA - United States National Fire Protection Association

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

DOT - United States Department of Transportation

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.