

SAFETY DATA SHEET

COBALT(III)FLUORIDE

Page: 1

Compilation date: 18/11/2002

Revision date: 25/11/2011

Revision No: 2

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: COBALT(III)FLUORIDE

CAS number: 10026-18-3

EINECS number: 233-062-4

Product code: PC5678

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

1.3. Details of the supplier of the safety data sheet

Company name: Apollo Scientific Ltd

Units 3 & 4

Parkway

Denton

Manchester

M34 3SG

UK

Tel: 0161 337 9971

Fax: 0161 336 6932

Email: david.tideswell@apolloscientific.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: O: R8; Xn: R20/21/22; C: R34; Xn: R40; Sens.: R43

Classification under CLP: Acute Tox. 4: H302+312+332; Carc. 2: H351; Skin Corr. 1B: H314; Skin Sens. 1: H317;
Ox. Sol. 3: H272

Most important adverse effects: Contact with combustible material may cause fire. Harmful by inhalation, in contact with skin and if swallowed. Causes burns. Limited evidence of a carcinogenic effect. May cause sensitisation by skin contact.

2.2. Label elements

Label elements under CLP:

Hazard statements: H302+312+332: Harmful if swallowed, in contact with skin or if inhaled.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H272: May intensify fire; oxidiser.

H351: Suspected of causing cancer.

[cont...]

SAFETY DATA SHEET

COBALT(III)FLUORIDE

Page: 2

Signal words: Danger

Hazard pictograms: GHS03: Flame over circle

GHS05: Corrosion

GHS07: Exclamation mark

GHS08: Health hazard



Precautionary statements: P280: Wear protective gloves/protective clothing/eye protection/face protection.

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Label elements under CHIP:

Hazard symbols: Oxidising.

Corrosive.



Risk phrases: R8: Contact with combustible material may cause fire.

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R34: Causes burns.

R40: Limited evidence of a carcinogenic effect.

R43: May cause sensitisation by skin contact.

Safety phrases: S17: Keep away from combustible material.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: COBALT(III)FLUORIDE

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

[cont...]

SAFETY DATA SHEET

COBALT(III)FLUORIDE

Page: 3

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

Skin contact: Causes burns Strong corrosive effect on skin and mucous membranes May cause sensitization by skin contact.

Eye contact: There may be irritation and redness.

Ingestion: Swallowing will lead to strong caustic effect on mouth and throat, to the danger of perforation of esophagus and stomach

Inhalation: There may be a feeling of tightness in the chest with shortness of breath.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide, dry chemical powder, foam. Suitable extinguishing media for the surrounding fire should be used. Do not use water.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Corrosive. Oxidising. In combustion emits toxic fumes. Hydrogen fluoride (HF). Cobalt oxides.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Remove all incompatible materials as outlined in section 10 of SDS.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Avoid the formation or spread of dust in the air. Only use in fume hood.

[cont...]

SAFETY DATA SHEET

COBALT(III)FLUORIDE

Page: 4

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Avoid incompatible materials and conditions - see section 10 of SDS. Moisture sensitive. Air sensitive. Store under Argon.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: Not applicable.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter.

Hand protection: Protective gloves.

Eye protection: Safety goggles.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Powder

Colour: Light Brown

Odour: Acrid

Oxidising: Oxidising (by EC criteria)

Solubility in water: Reacts with water.

Relative density: 3.88 g/cm³

9.2. Other information

Other information: Not applicable.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions. Reacts with reducing agents.

10.2. Chemical stability

Chemical stability: Stable under normal conditions. Stable at room temperature.

[cont...]

SAFETY DATA SHEET

COBALT(III)FLUORIDE

Page: 5

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Oxidiser: will readily oxidize other materials that come into contact with it. Reacts with water to liberate oxygen. Incandesces with silicon.

10.4. Conditions to avoid

Conditions to avoid: Heat. Flames. Sources of ignition. Air. Moist air. Humidity.

10.5. Incompatible materials

Materials to avoid: Organic materials. Combustible material Reducing agents. Finely powdered metals.
Water. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes. Hydrogen fluoride (HF). Oxides of Cobalt.

Section 11: Toxicological information

11.1. Information on toxicological effects

Relevant hazards for substance:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	INH DRM ING	Based on test data
Skin corrosion/irritation	DRM	Based on test data
Serious eye damage/irritation	OPT	Based on test data
Respiratory/skin sensitisation	DRM	Based on test data
Carcinogenicity	--	Based on test data

Symptoms / routes of exposure

Skin contact: Causes burns Strong corrosive effect on skin and mucous membranes May cause sensitization by skin contact.

Eye contact: There may be irritation and redness.

Ingestion: Swallowing will lead to strong caustic effect on mouth and throat, to the danger of perforation of esophagus and stomach

Inhalation: There may be a feeling of tightness in the chest with shortness of breath.

Other information: Carcinogenicity IARC=2B: possibly carcinogenic to humans ACGIH A3: Animal carcinogen.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: Not applicable.

12.2. Persistence and degradability

Persistence and degradability: No data available.

[cont...]

SAFETY DATA SHEET

COBALT(III)FLUORIDE

Page: 6

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: MATERIAL SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

Disposal of packaging: Dispose of as special waste in compliance with local and national regulations Observe all federal, state and local environmental regulations.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3084

14.2. UN proper shipping name

Shipping name: CORROSIVE SOLID, OXIDIZING, N.O.S.

14.3. Transport hazard class(es)

Transport class: 8 (5.1)

14.4. Packing group

Packing group: II

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 2

Section 15: Regulatory information

[cont...]

SAFETY DATA SHEET

COBALT(III)FLUORIDE

Page: 7

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

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* Data predicted using computational software. Toxtree - Toxic Hazard Estimation by decision tree approach. <http://ecb.jrc.ec.europa.eu/qsar/qsar-tools/index.php?c=TOXTREE>

c=TOXTREE

~ Data predicted using computational software ACD/ToxSuite v 2.95.1 Copyright 1994-2009 ACD/labs, Copyright 2001-2009 Pharma Algorithms, Inc, Advanced Chemistry Development, Inc (ACD/Labs). http://www.acdlabs.com/products/pc_admet/tox/tox/

Phrases used in s.2 and 3: H272: May intensify fire; oxidiser.

H302+312+332: Harmful if swallowed, in contact with skin or if inhaled.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H351: Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

R8: Contact with combustible material may cause fire.

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R34: Causes burns.

R40: Limited evidence of a carcinogenic effect.

R43: May cause sensitisation by skin contact.

Legal disclaimer: The material is intended for research purposes only and should be handled exclusively by those who have been fully trained in safety, laboratory and chemical handling procedures. The above information is believed to be correct to the best of our knowledge. The above information is believed to be correct to the best of our knowledge at the date of its publication, but should not be considered to be all inclusive. It should be used only as a guide for safe handling, storage, transportation and disposal. We cannot guarantee that the hazards detailed in this document are the only hazards that exist for this product. This is not a warranty and Apollo Scientific Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.