SAFETY DATA SHEET

UNIVERSAL FLUORINE REAGENT

Compilation date: 16/04/2015

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Revision No: 13

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

1.1. Product identifier

Product name: UNIVERSAL FLUORINE REAGENT

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

Use of substance / mixture: PC21: Laboratory chemicals. PROC15: Use as laboratory reagent

1.3. Details of the supplier of the safety data sheet

Company name: Elemental Microanalysis Ltd

1 Hameldown Road Okehampton

Okehampton

Devon

EX20 1UB

United Kingdom

Tel: 44(0)183754446

Fax: 44(0)183754544

Email: info@microanalysis.co.uk

1.4. Emergency telephone number

Emergency tel: +44 (0) 7990 767375

(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: * Acute Tox. 4: H302; Aquatic Chronic 3: H412; Resp. Sens. 1: H334

Most important adverse effects: Harmful if swallowed. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements:

Hazard statements: * H302: Harmful if swallowed.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H412: Harmful to aquatic life with long lasting effects.

Hazard pictograms: GHS07: Exclamation mark

GHS08: Health hazard

[cont...]

Signal words: Danger

Precautionary statements: * P261: Avoid breathing dust.

P284: Wear respiratory protection.

P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P330: Rinse mouth.

P342+P311: If experiencing respiratory symptoms: Call a doctor.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

*** Hazardous ingredients:**

COBALT (II,III) OXIDE.

EINECS	CAS	PBT / WEL	CLP Classification	Percent
215-157-2	1308-06-1	-	Aquatic Chronic 3: H412; Resp. Sens. 1: H334	30-50%

ZIRCONIUM OXIDE

215-227-2	1314-23-4	Substance with a Community workplace exposure limit.	-	10-30%

SILVER VANADATE

236-820-2	13497-94-4	-	Acute Tox. 3: H301; Acute Tox. 3: H311; Skin Irrit. 2: H315; Eye Irrit. 2: H319; Acute Tox. 3: H331; STOT SE 3: H335	1-10%

SILVER.

231-131-3	7440-22-4	Substance with a Community workplace exposure limit.	-	1-10%

MAGNESIUM OXIDE.

215-171-9	1309-48-4	Substance with a Community workplace exposure limit.	-	1-10%

Contains: *

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: * Wash immediately with plenty of soap and water.

Eye contact: * Bathe the eye with running water for 15 minutes.

Ingestion: * Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible.

[cont...]

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

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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: Suitable extinguishing media for the surrounding fire should be used.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

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: * Refer to section 8 of SDS for personal protection details. Do not create dust. Mark out the contaminated area with signs and prevent access to unauthorised personnel. If outside do not approach from downwind.

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

[cont...]

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. Avoid direct contact with the substance.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

COBALT (II,III) OXIDE.

Workplace exposure limits: **Respirable dust:**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
EU	0.1 mg/m3	-	-	-

SILVER.

EU	0.1mg/m3	-	-	-

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

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

Respiratory protection: * Respiratory protective device with particle filter.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Solid

Colour: Grey

Odour: Odourless

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: No data available.

Boiling point/range°C: No data available. **Melting point/range°C:** No data available.

Flammability limits %: lower: No data available. **upper:** No data available.

Flash point°C: No data available.

[cont...]

Part.coeff. n-octanol/water: No data available.

Autoflammability°C: No data available.

Vapour pressure: No data available.

Relative density: No data available.

pH: No data available.

VOC g/l: No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

COBALT (II,III) OXIDE.

DERMAL	RAT	LD50	2000	mg/kg
DUST/MIST	RAT	4H LC50	5.06	mg/kg
ORAL	RAT	LD50	5000	mg/kg

SILVER.

ORAL	MUS	LD50	10000	mg/kg
ORAL	RAT	LD50	2000	mg/kg

[cont...]

Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	ING	Hazardous: calculated
Respiratory/skin sensitisation	INH	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

COBALT (II,III) OXIDE.

ALGAE	72H IC50	88	mg/l
Daphnia magna	48H EC50	136	mg/l

ZIRCONIUM OXIDE

Daphnia magna	48H EC50	100	mg/l
ZEBRAFISH (Brachydanio rerio)	96H LC50	100	mg/l

SILVER.

Daphnia magna	48H LC50	0.00022mg/kg	mg/l

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

[cont...]

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

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: UN3285

14.2. UN proper shipping name

Shipping name: VANADIUM COMPOUND, N.O.S.

14.3. Transport hazard class(es)

Transport class: 6.1

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: D/E

Transport category: 2

Section 15: Regulatory information

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

Specific regulations: Not applicable.

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: according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H301: Toxic if swallowed.

[cont...]

H302: Harmful if swallowed.

H311: Toxic in contact with skin.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H331: Toxic if inhaled.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335: May cause respiratory irritation.

H412: Harmful to aquatic life with long lasting effects.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.