

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Product name:** UNIVERSAL COMBUSTION ADDITIVE**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of substance / mixture:** PC21: Laboratory chemicals.**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 (24 hours)**Section 2: Hazards identification****2.1. Classification of the substance or mixture**

Classification under CLP: Acute Tox. 3: H301+311+331; Carc. 1Ai: H350i; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335

Most important adverse effects: Toxic if swallowed, in contact with skin or if inhaled. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. May cause cancer by inhalation.

2.2. Label elements**Label elements:****Hazard statements:** H301+311+331: Toxic if swallowed, in contact with skin or if inhaled.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H350i: May cause cancer by inhalation.

Hazard pictograms: GHS06: Skull and crossbones

GHS08: Health hazard

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Signal words: Danger

Precautionary statements: P260: Do not breathe dust/fumes/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/.
P302+350: IF ON SKIN: Gently wash with plenty of soap and water.
P302+352: IF ON SKIN: Wash with plenty of water/.
P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

2.3. Other hazards

Other hazards: Danger of serious damage to health by prolonged exposure.

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

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

SILVER VANADATE

EINECS	CAS	PBT / WEL	CLP Classification	Percent
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	30-50%

SILVER TUNGSTATE

-	13465-93-5	-	Skin Irrit. 2: H315; Eye Irrit. 2: H319; STOT SE 3: H335	30-50%
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COBALT (II,III) OXIDE

215-157-2	1308-06-1	-	Skin Sens. 1: H317; Carc. 2: H351; Carc. 1A: H350; Carc. 1Ai: H350i	30-50%
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Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin.
Consult a doctor. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin.

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

Ingestion: Wash out mouth with water. Consult a doctor.

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

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

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

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: Exposure may cause coughing or wheezing.

Delayed / immediate effects: Delayed effects can be expected after long-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: Do not attempt to take action without suitable protective clothing - see section 8 of SDS.
Do not create dust.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Alert the neighbourhood to the presence of fumes or gas.

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. Clean-up should be dealt with only by qualified personnel familiar with the specific substance.

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: Avoid direct contact with the substance. Avoid the formation or spread of dust in the air.
Ensure there is sufficient ventilation of the area.

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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:

SILVER TUNGSTATE

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	-	-	5mg/m3	-

COBALT (II,III) OXIDE

EU	0.1 mg/m3	-	-	-
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DNEL/PNEC Values

DNEL / PNEC No data available.

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. Particle filter class P2S (EN143).

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: Powder

Colour: Black

Odour: Odourless

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: No data available.

Viscosity: No data available.

Boiling point/range°C: No data available.

Flammability limits %: lower: No data available.

Flash point°C: No data available.

Autoflammability°C: No data available.

Melting point/range°C: No data available.

upper: No data available.

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

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Relative density: No data available.

Vapour pressure: 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. Hot surfaces. Flames.

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

Relevant hazards for substance:

Hazard	Route	Basis
Acute toxicity (ac. tox. 3)	INH DRM ING	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

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Respiratory/skin sensitisation	DRM	Hazardous: calculated
Carcinogenicity	--	Hazardous: calculated
STOT-single exposure	INH	Hazardous: calculated

Symptoms / routes of exposure

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

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: Exposure may cause coughing or wheezing.

Delayed / immediate effects: Delayed effects can be expected after long-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

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.

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.

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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: III

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

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

This safety data sheet is prepared in accordance with Commission Regulation (EC) No 1272/2008.

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

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

H301+311+331: Toxic if swallowed, in contact with skin or if inhaled.

H311: Toxic in contact with skin.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

[cont...]

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H331: Toxic if inhaled.

H335: May cause respiratory irritation.

H350i: May cause cancer by inhalation.

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

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.