SAFETY DATA SHEET
ZINC BLACK

Compilation date: 05/12/2016

Revision No: 1

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

1.1. Product identifier

Product name: **ZINC BLACK**

Synonyms: **COLD BLACK**

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

Use of substance / mixture: PC14: Metal surface treatment products, including galvanic and electroplating products.

PROC13: Treatment of articles by dipping and pouring

1.3. Details of the supplier of the safety data sheet

Company name: **FROST** **A.R.T.** Ltd

Albion Park

Warrington Rd

Glazebury

WA3 3PG

Tel: +44(0)1925 648 555

Email: customerservice@frost.co.uk

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Eye Irrit. 2: H319; Muta. 2: H341; Aquatic Chronic 2: H411; Carc. 1Ai: H350i; Repr. 1B: H360D; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 1: H372

Most important adverse effects: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing genetic defects. May cause cancer by inhalation. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements:

Hazard statements: H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

[cont...]

H341: Suspected of causing genetic defects.

H350i: May cause cancer by inhalation.

H360D: May damage the unborn child.

H372: Causes damage to organs through prolonged or repeated exposure.

H411: Toxic to aquatic life with long lasting effects.

Signal words: Danger

Hazard pictograms: GHS08: Health hazard

GHS09: Environmental

Precautionary statements: P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe fumes/gas/mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P273: Avoid release to the environment.

P280: Wear protective gloves/eye protection/face protection.

P302+352: IF ON SKIN: Wash with plenty of water/soap and water.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313: Get medical attention.

P332+313: If skin irritation occurs: Get medical.

P333+313: If skin irritation or rash occurs: Get medical attention.

P362+364: Take off contaminated clothing and wash it before reuse.

P405: Store locked up.

P501: Dispose of contents/container to hazardous waste.

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:

SODIUM CHLORATE

EINECS	CAS	PBT / WEL	CLP Classification	Percent
231-887-4	7775-09-9	-	Ox. Sol. 1: H271; Acute Tox. 4: H302; Aquatic Chronic 2: H411	1-10%

[cont...]

TRISODIUM NITRILOTRIACETATE

225-768-6	5064-31-3	-	Carc. 2: H351; Acute Tox. 4: H302; Eye Irrit. 2: H319	1-10%

NICKEL SULPHATE

232-104-9	7786-81-4	-	Muta. 2: H341; Repr. 1B: H360D; STOT RE 1: H372; Carc. 1A: H350; Carc. 1Ai: H350i	1-10%

COPPER SULPHATE

231-847-6	7758-98-7	-	Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Aquatic Chronic 1: H410; Aquatic Acute 1: H400	1-10%

SELENIUM COMPOUNDS EXCEPT CADMIUM SULPHOSELENIDE

-	-	-	Acute Tox. 3: H331; Acute Tox. 3: H301; STOT RE 2: H373; Aquatic Chronic 1: H410; Aquatic Acute 1: H400	1-10%

POTASSIUM BIFLUORIDE

232-156-2	7789-29-9	-	Acute Tox. 3: H301; Skin Corr. 1B: H314	<1%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: For even minor contact, immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Wash contaminated clothing before re-use. If skin irritation occurs: Get medical advice/attention.

Eye contact: Immediately flush with plenty of water for up to 15 minutes. Get medical attention immediately.

Ingestion: Do not induce vomiting. Wash out mouth with water. Get medical attention immediately!

Inhalation: Not applicable; likely occurence not possible under normal conditions of use. If respiratory irritation does occur obtain medical attention.

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 pain. The eyes may water profusely.

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

Inhalation: Inhalation of mist or spray will cause severe respiratory irritation.

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: Eye bathing equipment should be available on the premises.

[cont...]

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: Very toxic. 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. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. 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: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

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

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): Refer to Section 1

Section 8: Exposure controls/personal protection

[cont...]

8.1. Control parameters

Hazardous ingredients:

COPPER SULPHATE

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	1 mg/m3	2 mg/m3	-	-

POTASSIUM BIFLUORIDE

UK	2.5 mg/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: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Protective gloves.

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

Skin protection: Acid-resistant protective clothing.

Environmental: Prevent from entering in public sewers or the immediate environment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Blue

Odour: Odourless

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: Miscible

Viscosity: Viscous

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.

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

Autoflammability°C: No data available.

Vapour pressure: No data available.

Relative density: 1.13 (Typical)

pH: 3 (Approx)

VOC g/l: No data available.

9.2. Other information

Other information: Not applicable.

[cont...]

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:

SODIUM CHLORATE

ORL	MUS	LD50	8350	mg/kg
ORL	RAT	LD50	1200	mg/kg

NICKEL SULPHATE

IPR	MUS	LD50	20894	µg/kg
IPR	RAT	LD50	500	mg/kg
IVN	MUS	LDLO	7640	µg/kg

COPPER SULPHATE

IVN	RAT	LD50	48900	µg/kg
ORL	MUS	LD50	369	mg/kg
ORL	RAT	LD50	520	mg/kg

Relevant hazards for substance:

Hazard	Route	Basis

[cont...]

Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
Respiratory/skin sensitisation	DRM	Hazardous: calculated
Germ cell mutagenicity	--	Hazardous: calculated
Carcinogenicity	--	Hazardous: calculated
Reproductive toxicity	--	Hazardous: calculated
STOT-repeated exposure	-	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 pain. The eyes may water profusely.

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

Inhalation: Inhalation of mist or spray will cause severe respiratory irritation.

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

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

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: Serious 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: Toxic to aquatic organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

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

Recovery operations: Not applicable.

Disposal of packaging: 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.

[cont...]

Section 14: Transport information

14.1. UN number

UN number: UN3082

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Copper Sulphate, Selenium Dioxide)

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes **Marine pollutant:** No

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 3

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk: NOT APPLICABLE

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.

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

Phrases used in s.2 and s.3: H271: May cause fire or explosion; strong oxidiser.

H301: Toxic if swallowed.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

[cont...]

H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H341: Suspected of causing genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
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>.
H360D: May damage the unborn child.
H372: Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H373: May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H410: Very toxic to aquatic life with long lasting effects.
H411: Toxic 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.