

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name: CHEMICAL BLACKING SOLUTION

Product codes: PIX103, PIX203 and PIX503

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

Use of substance / mixture: In use this product should be diluted to 25% with water. PC14: Metal surface treatment products, including galvanic and electroplating products. PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC19: Hand-mixing with intimate contact and only PPE available USES ADVISED
AGAINST: PROC7: Industrial spraying PROC11: Non industrial spraying

1.3. Details of the supplier of the safety data sheet

Company name: Pixel-Plus

Ty Mawr

Bryncroes

Pwllheli

LL53 8EH

UK

Tel: +44 (0)1758-730356

Fax: +44 (0)1758-730356

Email: sales@black-it.co.uk

1.4. Emergency telephone number

Emergency tel: +44 (0)7795-824423

Section 2: Hazards identification**2.1. Classification of the substance or mixture**

Classification under CHIP: T: R61; Xn: R20/22; Xn: R33; C: R34; Xn: R40; Sens.: R42/43; T: R48/23; N: R51/53; Xn: R68

Most important adverse effects: May cause harm to the unborn child. Harmful by inhalation and if swallowed. Danger of cumulative effects. Causes burns. Limited evidence of a carcinogenic effect. May cause sensitisation by inhalation and skin contact. Toxic: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of irreversible effects.

2.2. Label elements

Label elements under CHIP:

Hazard symbols: Dangerous for the environment.

Toxic.

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Risk phrases: R61: May cause harm to the unborn child.
R20/22: Harmful by inhalation and if swallowed.
R33: Danger of cumulative effects.
R34: Causes burns.
R40: Limited evidence of a carcinogenic effect.
R42/43: May cause sensitisation by inhalation and skin contact.
R48/23: Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68: Possible risk of irreversible effects.

Safety phrases: S23: Do not breathe dust and aerosol.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.
S61: Avoid release to the environment. Refer to special instructions / safety data sheets.
S63: In case of accident by inhalation, remove casualty to fresh air and keep at rest.

Precautionary phrases: Restricted to professional users.

2.3. Other hazards

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

Section 3: Composition/information on ingredients

3.2. Mixtures

NICKEL SULPHATE - REACH registered number(s): 01-2119439361-44-XXXX

232-104-9	7786-81-4	T: R49; Xn: R68; T: R61; T: R48/23; Xn: R20/22; Xi: R38; Sens.: R42/43; N: R50/53	Muta. 2: H341; Repr. 1B: H360D; STOT RE 1: H372; Carc. 1A: H350; Carc. 1Ai: H350i	1-10%
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COPPER SULPHATE - REACH registered number(s): 01-2119520556-40-XXXX

231-847-6	7758-98-7	Xn: R22; Xi: R36/38; N: R50/53	Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Aquatic Chronic 1: H410; Aquatic Acute 1: H400	1-10%
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POTASSIUM BIFLUORIDE - REACH registered number(s): 01-2119960644-32-XXXX

232-156-2	7789-29-9	T: R25; C: R34	Acute Tox. 3: H301; Skin Corr. 1B: H314	1-10%
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SELENIUM DIOXIDE

231-194-7	7446-08-4	T: R23/25; Xn: R33; -: R53	Acute Tox. 3: H301; STOT RE 2: H373; Aquatic Chronic 4: H413; Aquatic Acute 1: H400; Acute Tox. 3: H331	1-10%
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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. 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. Transfer to hospital for specialist examination.
- Ingestion:** Wash out mouth with water. If conscious, give half a litre of water to drink immediately.
- Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so.

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.
- Ingestion:** There may be vomiting and diarrhoea.
- Inhalation:** Exposure may cause coughing or wheezing.

Delayed / immediate effects: No data available.

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

Immediate / special treatment: Eye bathing equipment should be available on the premises.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Water spray. Water fog.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes of carbon dioxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear protective clothing to prevent contact with skin and eyes. (EN1486). Wear self-contained breathing apparatus. Type 2 (EN137).

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Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Turn leaking containers leak-side up to prevent the escape of liquid. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 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: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Wash the spillage site with large amounts of water.

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 the formation or spread of mists in the air. Do not breathe vapors or spray mist. Avoid the formation or spread of dust in the air. Avoid direct contact with the substance. The product must never be sprayed or subjected to any mechanical process which could cause it to become inhalable in the form of dust, spray or mist.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Keep away from direct sunlight. The floor of the storage room must be impermeable to prevent the escape of liquids.

Suitable packaging: Polyethylene. Do not use steel containers. Do not use aluminium containers.

7.3. Specific end use(s)

Specific end use(s): PC14: Metal surface treatment products, including galvanic and electroplating products.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

NICKEL SULPHATE

Workplace exposure limits:

Respirable dust

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

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COPPER SULPHATE

UK	-	2mg/m3	0.2mg/m3	-
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POTASSIUM BIFLUORIDE

UK	2.5mg/m3	-	-	-
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SELENIUM DIOXIDE

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

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: The floor of the storage room must be impermeable to prevent the escape of liquids. In case of dust, mist or aerosol use full or half face breathing protection approved to B2-P3 (EN14387:2004)

Respiratory protection: Care should be taken that the product is never sprayed or subjected to any mechanical process that will generate mists.

Hand protection: Gloves (acid resistant). Breakthrough time of the glove material > 8 hours.

Eye protection: Safety goggles. Minimum F3 (EN166.2)

Skin protection: Protective clothing. Type 6 (EN13034)

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: Perceptible odour

Solubility in water: Soluble

Boiling point/range°C: 100

Flash point°C: >93

Relative density: 1.16

pH: 3-3.50

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 at room temperature.

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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. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: No data available.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
ORAL	RAT	LD50	1982	mg/kg
DERMAL	RBT	LD50	35478	mg/kg

Hazardous ingredients:

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 effects for mixture:

Effect	Route	Basis
Acute toxicity (harmful)	INH ING	Hazardous: calculated
Corrosivity	OPT INH DRM	Hazardous: calculated
Sensitisation	INH DRM	Hazardous: calculated
Repeated dose toxicity	--	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.

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Ingestion: There may be vomiting and diarrhoea.

Inhalation: Exposure may cause coughing or wheezing.

Delayed / immediate effects: No data available.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
FISH	96H LC50	14	mg/l

Hazardous ingredients:

NICKEL SULPHATE

Daphnia magna	48H EC50	9.48	mg/l
GREEN ALGA (<i>Selenastrum capricornutum</i>)	72H ErC50	0.75	mg/l

12.2. Persistence and degradability

Persistence and degradability: Not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: Soluble in water.

12.5. Results of PBT and vPvB assessment

Persistence (P-):

Persistence result: not P-

Bioaccumulation (B-):

Bioaccumulation result: not B-

Toxicity (T-):

mg/l

NOEC for marine or freshwater organisms: <0.1

Carc. cat. 1/2, Muta. cat 1/2, Tera. cat. 1/2/3, R48 (see s.2): Yes

Toxicity result: T

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

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13.1. Waste treatment methods

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

Waste code number: 11 01 98

Disposal of packaging: May be reused following decontamination.

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: UN3264

14.2. UN proper shipping name

Shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Contains Potassium Bifluoride <2%)

14.3. Transport hazard class(es)

Transport class: 8

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

Section 15: Regulatory information

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.

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

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

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

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- H315: Causes skin irritation.
- 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.
- 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.
- H413: May cause long lasting harmful effects to aquatic life.
- R20/22: Harmful by inhalation and if swallowed.
- R22: Harmful if swallowed.
- R23/25: Toxic by inhalation and if swallowed.
- R25: Toxic if swallowed.
- R33: Danger of cumulative effects.
- R34: Causes burns.
- R36/38: Irritating to eyes and skin.
- R38: Irritating to skin.
- R40: Limited evidence of a carcinogenic effect.
- R42/43: May cause sensitisation by inhalation and skin contact.
- R48/23: Toxic: danger of serious damage to health by prolonged exposure through inhalation.
- R49: May cause cancer by inhalation.
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R53: May cause long-term adverse effects in the aquatic environment.
- R61: May cause harm to the unborn child.
- R68: Possible risk of irreversible effects.

Legend to abbreviations:

PNEC = predicted no effect level

DNEL = derived no effect level

LD50 = median lethal dose

LC50 = median lethal concentration

EC50 = median effective concentration

IC50 = median inhibitory concentration

[cont...]

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dw = dry weight

bw = body weight

cc = closed cup

oc = open cup

MUS = mouse

GPG = guinea pig

RBT = rabbit

HAM = hamster

HMN = human

MAM = mammal

PGN = pigeon

IVN = intravenous

SCU = subcutaneous

SKN = skin

DRM = dermal

OCC = ocular/corneal

PCP = physico-chemical properties

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.