

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**Product name: CHEMICAL BLACKING CREAM
Product code: PIX555**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of substance / mixture: Use as supplied. PC14: Metal surface treatment products, including galvanic and electroplating products. PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC19: Hand-mixing with intimate contact and only PPE available ERC5: Industrial use resulting in inclusion into or onto a matrix

1.3. Details of the supplier of the safety data sheetCompany 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: R22; C: R34; Sens.: R42/43; T: R48/23; N: R51/53; Xn: R68/20/22
Most important adverse effects: May cause harm to the unborn child. Harmful if swallowed. Causes burns. 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. Harmful: possible risk of irreversible effects through inhalation and if swallowed.**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.
R22: Harmful if swallowed.
R34: Causes burns.
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.
R68/20/22: Harmful: possible risk of irreversible effects through inhalation and if swallowed.

Safety phrases: S22: Do not breathe dust.
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

NITRIC ACID - REACH registered number(s): 01=2119487297-23-XXXX

| | | | | |
|-----------|-----------|---------------|---------------------------------------|-------|
| 231-714-2 | 7697-37-2 | O: R8; C: R35 | Ox. Liq. 3: H272; Skin Corr. 1A: H314 | 1-10% |
|-----------|-----------|---------------|---------------------------------------|-------|

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% |
|-----------|-----------|--------------------------------|---|-------|

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% |
|-----------|-----------|----------------|---|-----|

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% |
|-----------|-----------|----------------------------|---|-----|

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. Give 1 cup of water to drink every 10 minutes. Consult a doctor.
- 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 mild irritation at the site of contact.
- Eye contact:** There may be irritation and redness.
- Ingestion:** There may be vomiting and diarrhoea.
- Inhalation:** There may be coughing and a sore throat.

Delayed / immediate effects: No data available.

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

Immediate / special treatment: Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. 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 self-contained breathing apparatus. Type 2 (EN137). Wear protective clothing to prevent contact with skin and eyes. (EN1486).

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Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: 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: Ensure there is sufficient ventilation of the area. Avoid the formation or spread of dust in the air. Avoid direct contact with the substance. Avoid the formation or spread of mists in the air.
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: Keep away from sources of ignition. Keep container tightly closed. Keep away from direct sunlight.

Suitable packaging: Polyethylene.

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:

NITRIC ACID...100%

Workplace exposure limits:

Respirable dust

| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
|-------|------------|--------------|------------|--------------|
| UK | - | 2.6 mg/m3 | - | - |

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NICKEL SULPHATE

| | | | | |
|----|---|---|----------|---|
| UK | - | - | 0.1mg/m3 | - |
|----|---|---|----------|---|

COPPER SULPHATE

| | | | | |
|----|---|--------|----------|---|
| UK | - | 2mg/m3 | 0.2mg/m3 | - |
|----|---|--------|----------|---|

POTASSIUM BIFLUORIDE

| | | | | |
|----|----------|---|---|---|
| UK | 2.5mg/m3 | - | - | - |
|----|----------|---|---|---|

SELENIUM DIOXIDE

| | | | | |
|----|----------|---|---|---|
| UK | 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. In case of dust, mist or aerosol use full or half face breathing protection approved to B2-P3 (EN14387:2004)
- Respiratory protection: In case of mist, spray, aerosol or dust exposure wear suitable personal respiratory protection.
- Hand protection: PVC gloves. Breakthrough time of the glove material > 8 hours.
- Eye protection: Safety goggles. F5 (EN166)
- Skin protection: Plastic apron. BS EN 14605 Type PB[4]
- 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: Paste
- Colour: Pale blue
- Odour: Perceptible odour. Irritating/Alcoholic
- Evaporation rate: Negligible
- Oxidising: Non-oxidising (by EC criteria)
- Solubility in water: Slightly soluble
- Viscosity: Highly viscous
- Boiling point/range°C: >35
- Flash point°C: >93
- Relative density: 1.08
- pH: 2.25

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.

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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: 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 | 2995 | mg/kg |
| DERMAL | RBT | LD50 | 7249 | mg/kg |
| DUST/MIST | RAT | 4H LC50 | 0.072 | mg/l |

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) | ING | Hazardous: calculated |
| Corrosivity | OPT INH DRM | Hazardous: calculated |

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| | | |
|------------------------|---------|-----------------------|
| Sensitisation | INH DRM | Hazardous: calculated |
| Repeated dose toxicity | 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 vomiting and diarrhoea.

Inhalation: There may be coughing and a sore throat.

Delayed / immediate effects: No data available.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

| Species | Test | Value | Units |
|---------|----------|-------|-------|
| FISH | 96H LC50 | 23 | 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

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.

Waste code number: 11 01 98

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.

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Section 14: Transport information

14.1. UN number

UN number: UN3260

14.2. UN proper shipping name

Shipping name: CORROSIVE SOLID, 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: H272: May intensify fire; oxidiser.

H301: Toxic if swallowed.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

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>.

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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.

R8: Contact with combustible material may cause fire.

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.

R35: Causes severe burns.

R36/38: Irritating to eyes and skin.

R38: Irritating to skin.

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.

R68/20/22: Harmful: possible risk of irreversible effects through inhalation and if swallowed.

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
dw = dry weight
bw = body weight
cc = closed cup

[cont...]

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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.