



SAFETY DATA SHEET
BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 1
Compilation date: 10/01/2012
Revision date: 03/07/2017
Revision No: 16

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

1.1. Product identifier

Product name: BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Product code: 181

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. PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC13: Treatment of articles by dipping and pouring 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: Blackfast Chemicals Ltd.

Unit 5 Russell House

Molesey Road

Walton-on-Thames

Surrey

KT12 3PE

UK

Tel: +44 (0)208 339 7370

Fax: +44 (0)208 339 7371

Email: sales@blackfast.com

1.4. Emergency telephone number

Emergency tel: +44(0)1865 407333

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: STOT RE 1: H372; Acute Tox. 4: H302; Aquatic Chronic 2: H411; Carc. 1Ai: H350i; Muta. 2: H341; Repr. 1B: H360D; Skin Corr. 1B: H314; Skin Sens. 1: H317; -: EUH208

Most important adverse effects: Contains Nickel Sulphate. May produce an allergic reaction. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects Perinatal lethality. Route of exposure: inhalation of dust, mist and aerosol. May cause cancer by inhalation. May damage the unborn child. Causes damage to

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 2

organs Respiratory tract only through prolonged or repeated exposure via inhalation of dust, mist or aerosol. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements:

Hazard statements: EUH208: Contains Nickel Sulphate. May produce an allergic reaction.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic defects Perinatal lethality. Route of exposure: inhalation of dust, mist and aerosol.

H350i: May cause cancer by inhalation.

H360D: May damage the unborn child.

H372: Causes damage to organs Respiratory tract only through prolonged or repeated exposure via inhalation of dust, mist or aerosol.

H411: Toxic to aquatic life with long lasting effects.

Hazard pictograms: GHS05: Corrosion

GHS07: Exclamation mark

GHS08: Health hazard

GHS09: Environmental



Signal words: Danger

Precautionary statements: P102: Keep out of reach of children.

P260: Do not breathe dust/mist/spray.

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

P301+312: IF SWALLOWED: Call a if you feel unwell.

P301+330+331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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

P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

P308+313: IF exposed or concerned: Get medical advice.

P310: Immediately call a.

P314: Get medical advice if you feel unwell.

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 3

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	-	Muta. 2: H341; Repr. 1B: H360D; STOT RE 1: H372; Acute Tox. 4: H332; Skin Irrit. 2: H315; Resp. Sens. 1: H334; Skin Sens. 1: H317; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Carc. 1A: H350; Carc. 1Ai: H350i; Acute Tox. 4: H302	<5%
-----------	-----------	---	---	-----

COPPER SULPHATE - REACH registered number(s): 01-2119520556-40-XXXX

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	<5%
-----------	-----------	---	---	-----

ORTHOPHOSPHORIC ACID - REACH registered number(s): 01-2119485924-24-XXXX

231-633-2	7664-38-2	-	Skin Corr. 1B: H314	<5%
-----------	-----------	---	---------------------	-----

SELENIUM DIOXIDE - REACH registered number(s): 01-2120089867-33-XXXX

231-194-7	7446-08-4	-	Acute Tox. 3: H301+331; STOT RE 2: H373; Aquatic Acute 1: H400; Aquatic Chronic 1: H410	<5%
-----------	-----------	---	---	-----

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. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Consult a doctor.

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 4

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

Skin contact: There may be irritation and redness at the site of contact. An itchy rash may occur at the site of contact.

Eye contact: Corneal burns may occur. May cause permanent damage.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Blood may be vomited. There may be bleeding from the mouth or nose. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: Toxicological data is based on animal data.

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: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

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

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 5

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 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: 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:

COPPER SULPHATE

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	-	2mg/m3	0.2mg/m3	-

ORTHOPHOSPHORIC ACID...100%

UK	1	2	-	-
----	---	---	---	---

SELENIUM DIOXIDE

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

DNEL/PNEC Values

Hazardous ingredients:

NICKEL SULPHATE

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	0.05mg/m3	Workers	Systemic
DNEL	Inhalation	0.05mg/m3	Workers	Local
DNEL	Dermal	0.00044mg/cm2	Workers	Local
DNEL	Inhalation	20ng/m3	General Population	Systemic
DNEL	Inhalation	20ng/m3	General Population	Local
DNEL	Oral	0.022mg/kg	General Population	Systemic

ORTHOPHOSPHORIC ACID...100%

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	1mg/m3	-	Local

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 6

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:** Rubber gloves. Butyl gloves. Nitrile gloves. PVC gloves. Breakthrough time of the glove material > 8 hours.
- Eye protection:** Tightly fitting safety goggles. Ensure eye bath is to hand.
- Skin protection:** Apron. Boots.
- 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
- Evaporation rate:** Negligible
- Oxidising:** Non-oxidising (by EC criteria)
- Solubility in water:** Soluble
- Viscosity:** Non-viscous
- Boiling point/range°C:** 100
- Melting point/range°C:** No data available.
- Flammability limits %: lower:** No data available.
- upper:** No data available.
- Flash point°C:** >93
- Part.coeff. n-octanol/water:** No data available.
- Autoflammability°C:** No data available.
- Vapour pressure:** No data available.
- Relative density:** 1.16
- pH:** 3-3.5
- VOC g/l:** Not applicable.

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.

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 7

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:

NICKEL SULPHATE

ORAL	RAT	LD50	264	mg/kg
------	-----	------	-----	-------

COPPER SULPHATE

ORAL	HMN	LDLO	11	mg/kg
ORAL	RAT	LD50	482	mg/kg

ORTHOPHOSPHORIC ACID...100%

DERMAL	RBT	LD50	2470	mg/kg
ORL	RAT	LD50	1530	mg/kg

SELENIUM DIOXIDE

ORAL	RAT	LD50	68.1	mg/kg
------	-----	------	------	-------

Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	ING	Hazardous: calculated
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. An itchy rash may occur at the site of contact.

Eye contact: Corneal burns may occur. May cause permanent damage.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Blood may be vomited. There may be bleeding from the mouth or nose. There may be vomiting.

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 8

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: Toxicological data is based on animal data.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

NICKEL SULPHATE

ALGAE	72H ErC50	6.03	mg/l
ALGAE	96H LC50	18.4	mg/l
DAPHNIA	48H EC50	2.72	mg/l
FISH	96H LC50	14.7	mg/l

COPPER SULPHATE

ALGAE	48H EC50	0.1	mg/l
Daphnia magna	48H EC50	2.44	mg/l
Daphnia magna	96H LC50	0.1	mg/l
FISH	96H LC50	810	µg/l

SELENIUM DIOXIDE

ALGAE	72H ErC50	0.9	mg/l
DAPHNIA	48H EC50	4.8	mg/l
FISH	96H LC50	7.46	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: Readily absorbed into soil.

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

Toxicity result: not T-

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 9

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.

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.
(ORTHOPHOSPHORIC ACID <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

IMDG seg. group: 1 - ACIDS

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.

[cont...]

SAFETY DATA SHEET

BLACKFAST 181 CHEMICAL BLACKING SOLUTION

Page: 10

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

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

Phrases used in s.2 and s.3: EUH208: Contains <name of sensitising substance>. May produce an allergic reaction.

H301+331: Toxic if swallowed or if inhaled.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H334: May cause allergy or asthma symptoms or breathing difficulties 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>.

H400: Very toxic to aquatic life.

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.