



## SAFETY DATA SHEET

BLACKFAST 481 ALUMINIUM BLACKING SOLUTION

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Compilation date: 10/01/2012

Revision date: 02/05/2019

Revision No: 10

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

#### 1.1. Product identifier

**Product name:** BLACKFAST 481 ALUMINIUM BLACKING SOLUTION

**Product code:** 481

#### 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 ERC5: Industrial use resulting in inclusion into or onto a matrix 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:** Acute Tox. 4: H302; Muta. 2: H341; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Carc. 1Ai: H350i; Repr. 1B: H360D; Resp. Sens. 1: H334; Skin Corr. 1B: H314; Skin Sens. 1: H317; STOT RE 1: H372; -: EUH208

**Most important adverse effects:** Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if

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inhaled. Suspected of causing genetic defects (Perinatal lethality. Route of exposure: inhalation.). May cause cancer by inhalation. May damage the unborn child. Causes damage to organs (Respiratory tract only) through prolonged or repeated exposure (via inhalation of dust, mist and aerosol). Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Contains Nickel Sulphate. May produce an allergic reaction.

## 2.2. Label elements

### Label elements:

**Hazard statements:** H302: Harmful if swallowed.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H341: Suspected of causing genetic defects (Perinatal lethality. Route of exposure: inhalation.).  
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 and aerosol).  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.  
EUH208: Contains Nickel Sulphate. May produce an allergic reaction.

**Hazard pictograms:** GHS05: Corrosion  
GHS07: Exclamation mark  
GHS08: Health hazard  
GHS09: Environmental



**Signal words:** Danger

**Precautionary statements:** P260: Do not breathe dust/mist/spray.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P284: Wear respiratory protection.  
P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P302+P352: IF ON SKIN: Wash with plenty of water.  
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove

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contact lenses, if present and easy to do. Continue rinsing.

P308+P313: IF exposed or concerned: Get medical advice/attention.

P310: Immediately call a POISON CENTER or doctor.

P362+P364: Take off contaminated clothing and wash it before reuse.

## 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

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%
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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	<5%
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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%
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POTASSIUM BIFLUORIDE - REACH registered number(s): 01-2119960644-32-XXXX

232-156-2	7789-29-9	-	Acute Tox. 3: H301; Skin Corr. 1B: H314	<5%
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## Section 4: First aid measures

### 4.1. Description of first aid measures

**Skin contact:** Wash immediately with plenty of soap and water.

**Eye contact:** Bathe the eye with running water for 15 minutes.

**Ingestion:** Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible.

**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 mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

**Inhalation:** Absorption through the lungs can occur causing symptoms similar to those of ingestion.

**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:** Not applicable.

## 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:** 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. 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 the formation or spread of mists in the air. Avoid direct contact with the substance.

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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.

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

## 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:**

#### COPPER SULPHATE

**Workplace exposure limits:**

**Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	-	2mg/m <sup>3</sup>	0.2mg/m <sup>3</sup>	-

#### POTASSIUM BIFLUORIDE

UK	2.5mg/m <sup>3</sup>	-	-	-
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### DNEL/PNEC Values

**Hazardous ingredients:**

#### NICKEL SULPHATE

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	0.05mg/m <sup>3</sup>	Workers	Systemic
DNEL	Inhalation	0.05mg/m <sup>3</sup>	Workers	Local
DNEL	Dermal	0.00044mg/cm <sup>2</sup>	Workers	Local
DNEL	Inhalation	20ng/m <sup>3</sup>	General Population	Systemic
DNEL	Inhalation	20ng/m <sup>3</sup>	General Population	Local
DNEL	Oral	0.022mg/kg	General Population	Systemic

#### POTASSIUM BIFLUORIDE

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	3.1mg/m <sup>3</sup>	Workers	Systemic
DNEL	Oral	0.024mg/kg	General Population	Systemic

### 8.2. Exposure controls

**Engineering measures:** Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency.

**Hand protection:** 0,5 mm PVC gloves. Butyl gloves. Rubber gloves. 0,35 mm Nitrile gloves. Breakthrough time of the glove material > 8 hours.

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

**Skin protection:** Apron.

**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:** Green-blue

**Odour:** Perceptible odour

**Evaporation rate:** No data available.

**Oxidising:** Non-oxidising (by EC criteria)

**Solubility in water:** Soluble

**Viscosity:** No data available.

**Boiling point/range°C:** >35

**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:** 1.124

**pH:** 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.

### 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.

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## Section 11: Toxicological information

### 11.1. Information on toxicological effects

#### Hazardous ingredients:

##### COPPER SULPHATE

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

##### NICKEL SULPHATE

ORAL	RAT	LD50	264	mg/kg
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#### 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	INH 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 mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

**Inhalation:** Absorption through the lungs can occur causing symptoms similar to those of ingestion.

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

## Section 12: Ecological information

### 12.1. Toxicity

#### Hazardous ingredients:

##### COPPER SULPHATE

ALGAE	48H EC50	0.1	mg/l
Daphnia magna	48H EC50	2.44	mg/l

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Daphnia magna	96H LC50	0.1	mg/l
FISH	96H LC50	810	µg/l

## 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

### 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

**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.

**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.  
(POTASSIUM BIFLUORIDE <2%)

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## 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: 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.

## Section 16: Other information

### Other information

Other information: according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 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: Toxic if swallowed.  
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.  
H331: Toxic if inhaled.  
H332: Harmful if inhaled.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H341: Suspected of causing genetic defects ({{{0||message=<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>||filter=(\_)? EXP\_ROUTE\_+}}}).

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H350i: May cause cancer by inhalation.

H360D: May damage the unborn child.

H372: Causes damage to organs ({{{0}}|message=<or state all organs affected, if known>|filter=( )?ORGAN\_.+}}}) through prolonged or repeated exposure ({{{1}}|message=<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>|filter=( )?EXP\_ROUTE\_.+}}}).

H373: May cause damage to organs ({{{0}}|message=<or state all organs affected, if known>|filter=( )?ORGAN\_.+}}}) through prolonged or repeated exposure ({{{1}}|message=<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>|filter=( )?EXP\_ROUTE\_.+}}}).

H400: Very toxic to aquatic life.

H410: Very 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.