

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

Product Name	1-Bromo-4-fluorobenzene
Trade Name	BFB
Synonyms	Benzene, 1-bromo-4-fluoro-
Chemical Name	1-bromo-4-fluorobenzene
Chemical Formula	C6H4BrF
Product code	FP B026
CAS No.	460-00-4
EC No.	207-300-2
REACH Registration No.	01-2119964475-27-0002

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

Identified Use(s)	PC19 Intermediate
Uses Advised Against	Not known.

### 1.3 Details of the supplier of the safety data sheet

#### Manufacturer

Company Identification	Syntor Fine Chemicals Ltd
Address of Manufacturer	Unit11 Boleyn Court Manor Park
Postal code	WA7 1SR
Telephone:	+441928579865
Fax	+441928579734
E-mail	colin.lee@syntor.co.uk
Office hours	08:00 - 17:00

#### Supplier

Company Identification	Syntor Fine Chemicals Ltd
Address of Supplier	Unit11 Boleyn Court Manor Park
Postal code	WA7 1SR
Telephone:	+441928579865
Fax	+441928579734
E-mail	colin.lee@syntor.co.uk
Office hours	08:00 - 17:00

### 1.4 Emergency telephone number

Emergency Phone No.	+441928579865
Contact	Colin Lee

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP)	Flam. Liq. 3 :Flammable liquid and vapour. Skin Irrit. 2 :Causes skin irritation. Eye Irrit. 2 :Causes serious eye irritation. STOT SE 3 :May cause respiratory irritation.
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### 2.2 Label elements

	According to Regulation (EC) No. 1272/2008 (CLP)
Product Name	1-Bromo-4-fluorobenzene

Hazard Pictogram(s)



GHS02



GHS07

Signal Word(s)

Warning

Hazard Statement(s)

H226: Flammable liquid and vapour.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

Precautionary Statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

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

P312: Call a POISON CENTER/doctor if you feel unwell.

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use to extinguish.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents in accordance with local, state or national legislation.

### 2.3 Other hazards

None known.

### 2.4 Additional Information

For full text of H/P Statements see section 16.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / REACH Registration No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
1-bromo-4-fluorobenzene	460-00-4	207-300-2	99	Flam. Liq. 3 H226 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335	GHS02 GHS07

### 3.2 Mixtures

Not applicable.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact

Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see Medical Advice on this label). Take off immediately all contaminated clothing. Rinse skin with water.

Eye Contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion Treat symptomatically.

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

Causes burns.

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

Specific treatment (see Medical Advice on this label). Call a POISON CENTER/doctor if you feel unwell. Treat symptomatically.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

Suitable Extinguishing media Use to extinguish.

Unsuitable extinguishing media Water jet spray

**5.2 Special hazards arising from the substance or mixture**

Flammable liquid and vapour. Combustion or thermal decomposition will evolve toxic and irritant vapours.

**5.3 Advice for firefighters**

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Ensure full personal protection (including respiratory protection) during removal of spillages.

**6.2 Environmental precautions**

Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

**6.3 Methods and material for containment and cleaning up**

Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Containers must not be punctured or destroyed by burning, even when empty.

**6.4 Reference to other sections**

See Also Section 8, 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands and exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Storage temperature Ambient.

Storage life Stable under normal conditions.

Incompatible materials None known.

### 7.3 Specific end use(s)

PC19 Intermediate

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

8.1.1 Occupational Exposure Limits No Occupational Exposure Limit assigned.

### 8.2 Exposure controls

8.2.1. Appropriate engineering controls Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Ensure adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment



Eye Protection

Wear eye protection with side protection (EN166).



Skin protection

Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection

Normally no personal respiratory protection is necessary. Handling of larger amounts A suitable mask with filter type A (EN14387 or EN405) may be appropriate.



Thermal hazards

None known.

8.2.3. Environmental Exposure Controls Avoid release to the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Liquid. Colour : Colourless to pale yellow
Odour	Aromatic.
Odour threshold	Not known.
pH	Not known.
Melting point/freezing point	-16 °C
Initial boiling point and boiling range	Not known.
Flash Point	55 °C
Evaporation rate	Not known.
Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Not known.
Vapour pressure	Not known.
Vapour density	Not known.
Density (g/ml)	Not known.
Relative density	1.604 g/cm <sup>3</sup>
Solubility(ies)	Solubility (Water) : 0.14 g/cm <sup>3</sup> Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Not known.
Auto-ignition temperature	310 °C

Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Not known.
Oxidising properties	Not known.

**9.2 Other information**

None.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

None anticipated.

**10.2 Chemical Stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

No hazardous reactions known if used for its intended purpose.

**10.4 Conditions to avoid**

Avoid friction, sparks, or other means of ignition.

**10.5 Incompatible materials**

Not known.

**10.6 Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

Acute toxicity - Ingestion	Not classified.
Acute toxicity - Skin Contact	Not classified.
Acute toxicity - Inhalation	Not classified.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Skin sensitization data	Not classified.
Respiratory sensitization data	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.
Lactation	Not classified.
STOT - single exposure	May cause respiratory irritation.
STOT - repeated exposure	Not classified.
Aspiration hazard	Not classified.

**11.2 Other information**

Not known.

**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

**12.2 Persistence and Degradation**

Not known.

**12.3 Bioaccumulative potential**

Not known.

**12.4 Mobility in soil**

Not known.

**12.5 Results of PBT and vPvB assessment**

Not known.

**12.6 Other adverse effects**

Not known.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Do not allow to enter drains, sewers or watercourses. Do NOT landfill. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclaimer or incinerator. Dispose at suitable refuse site.

**13.2 Additional Information**

Disposal should be in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION**

**14.1 UN number**

UN No. 1993

**14.2 UN proper shipping name**

UN proper shipping name FLAMMABLE LIQUID, N.O.S.

**14.3 Transport hazard class(es)**

ADR/RID

ADR/RID Class 3

ADR Classification Code F1

Special Provisions 274 601

Limited Quantities 5 L

Excepted Quantities E1

Emergency Action Code •3Y

Mixed Packing Instructions for Packages P001 IBC03 LP01 R001

Special Packing Provisions for Packages

Mixed Packing Instructions for Packages MP19

Packing Instructions for Portable Tanks T4

Special Provisions for Portable Tanks TP1 TP29

Tank Code for Tanks LGBF

Special Provisions for Tanks

Vehicle for Tank Carriage FL

ADR Transport Category 3

Tunnel Restriction Code D/E

Special Provisions for Carriage - Packages V12

Special Provisions for Carriage - Bulk

Special Provisions for Carriage - Loading, Unloading and Handling

Special Provisions for Carriage - S2

Operation	
ADR HIN	30
IMDG	
IMDG Class	3
Special Provisions	274 601
Limited Quantities	5 L
Excepted Quantities	E1
Mixed Packing Instructions for Packages	P001 IBC03 LP01 R001
Special Packing Provisions for Packages	
Packing Instructions for Portable Tanks	T4
Special Provisions for Portable Tanks	TP1 TP29
IMDG EMS	F-E, S-E
Stowage and Handling	Category A
Segregation	
Marine Pollutant	
ICAO/IATA	
IATA Proper Shipping Name	FLAMMABLE LIQUID, N.O.S.
Excepted Quantities	E1
Passenger and Cargo Aircraft Limited Quantities Packing Instructions	Y344
Passenger and Cargo Aircraft Limited Quantities Max net Qty	10L
Passenger and Cargo Aircraft Packing Instructions	355
Passenger and Cargo Aircraft Max net Qty	60L
Cargo Aircraft Packing Instructions	366
Cargo Aircraft Max net Qty	220L
Special Provisions	A3
Emergency Response Guidebook (ERG) Code	3L
Labels	
Labels	3



**14.4 Packing group**

Packing group III

**14.5 Environmental hazards**

Environmental hazards Not classified as a Marine Pollutant.

**14.6 Special precautions for user**

Special precautions for user Not known.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

No information available

**SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very High Concern for Authorisation Not listed

REACH: ANNEX XIV list of substances subject to authorisation Not listed

subject to authorisation

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles 1-bromo-4-fluorobenzene (460-00-4)

Community Rolling Action Plan (CoRAP) Not listed

Regulation (EC) N° 850/2004 of the European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Not listed

**National regulations**

Other Not known.

**15.2 Chemical Safety Assessment**

A REACH chemical safety assessment has not been carried out.

**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements:

**LEGEND**

Hazard Pictogram(s)



GHS02



GHS07

GHS02: GHS: flame

GHS07: GHS: exclamation mark

Hazard classification

- Flam. Liq. 3 : Flammable liquid, Category 3
- Skin Irrit. 2 : Skin corrosion/irritation, Category 2
- Eye Irrit. 2 : Serious eye damage/irritation, Category 2
- STOT SE 3\_H335 : Specific target organ toxicity — single exposure, Category 3

Hazard Statement(s)

- H226: Flammable liquid and vapour.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.

Precautionary Statement(s)

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233: Keep container tightly closed.
- P240: Ground and bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/lighting/equipment.
- P242: Use non-sparking tools.



P243: Take action to prevent static discharges.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash hands and exposed skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

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

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

P312: Call a POISON CENTER/doctor if you feel unwell.

P321: Specific treatment (see Medical Advice on this label).

P332+P313: If skin irritation occurs: Get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/attention.

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

P370+P378: In case of fire: Use to extinguish.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents in accordance with local, state or national legislation.

ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS : Chemical Abstracts Service

CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

DNEL : Derived No Effect Level

EC : European Community

EINECS : European Inventory of Existing Commercial Chemical Substances

IATA : International Air Transport Association

IBC : Intermediate Bulk Container

ICAO : International Civil Aviation Organization

IMDG : International Maritime Dangerous Goods

LTEL : Long term exposure limit

PBT : Persistent, Bioaccumulative and Toxic

PNEC : Predicted No Effect Concentration

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL : Short term exposure limit

STOT : Specific Target Organ Toxicity

UN : United Nations

vPvB : very Persistent and very Bioaccumulative

#### Acronyms

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