

## 1: Identification of substance / mixture

### 1. Product Identifier

Substance

Product Name **CBZ-CI**  
Product Code M02865  
CAS Number 501-53-1  
Other Names  
IUPAC  
MFCD Number MFCD00000640  
EC/EINECS  
REACH Number Index-No

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

Research and Development

### 3. Details of the supplier of the safety data sheet

Fluorochem Ltd  
Unit 14, Graphite Way  
Hadfield  
Derbyshire  
SK13 1QH  
UK

Telephone: +44(0)1457 860111  
Fax: +44(0)1457 892799  
Email: sds@fluorochem.co.uk



### 4. Emergency telephone number

+44(0)7855 268577 -

## 2. Hazards Identification

### 1. Classification of the substance or mixture

H314	Skin Corr. 1B	
H318	Eye Dam. 1	
H330	Acute Tox. 2	
H335	STOT SE 3	
H350	Carc. 1B	
H400	Aquatic Acute 1	
H410	Aquatic Chronic 1	

### 2. Label elements

Signal Word **Danger**



### Hazard Statements

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer ..
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Precautionary Phrases

P202	Do not handle until all safety precautions have been read and understood.
P233	Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.

P273	Avoid release to the environment.
P391	Collect spillage.
P403	Store in a well-ventilated place.

### 3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

## 3. Composition / Information on Ingredients

### 1. Substances

Product Name	Hazards	Concentration
CBZ-CI		
CAS Number: 501-53-1	H314, H318, H330, H335, H350, H400, H410 Acute Tox. 2, Aquatic Acute 1, Aquatic Chronic 1, Carc. 1B, Eye Dam. 1, Skin Corr. 1B, STOT SE 3	<=100%

## 4. First Aid Measures

### 1. Description of first aid measures

<i>Skin Contact</i>	P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash immediately with plenty of soap and water.
<i>Eye Contact</i>	P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse opened eye for several minutes under running water.
<i>Ingestion</i>	P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Wash out mouth with water.
<i>Inhalation</i>	P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove casualty from exposure ensuring one's own safety whilst doing so.

### 2. Most important symptoms and effects

P308 + P313: IF exposed or concerned: Get medical advice/attention.  
There may be pain and redness.  
Severe burns may occur.

### 3. Indication of any immediate medical attention

No additional measures required

## 5. Firefighting measures

### 1. Extinguishing Media

<i>Suitable</i>	Carbon dioxide. Alcohol or polymer foam. Dry chemical powder.
<i>Unsuitable</i>	no data

### 2. Special Hazards arising from the substance or mixture

In combustion toxic fumes may form.

### 3. Advice for Fire Fighters

Wear self-contained breathing apparatus.  
Wear protective clothing to prevent contact with skin and eyes.

## 6. Accidental Release Measures

### 1. Personal Precautions

Eliminate all sources of ignition.  
Evacuate the area immediately.  
Do not attempt to take action without suitable protective clothing – see section 8 of SDS.

## 2. Environmental Precautions

Do not discharge into drains or rivers.  
Contain the spillage using bunding.  
Alert the neighbourhood to the presence of fumes or gas.

## 3. Methods & Materials

P391: Collect spillage.  
Mix with sand or vermiculite.  
Do not use equipment in clean-up procedure which may produce sparks.  
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

## 4. Preventing the occurrence of secondary hazards.

No Special Measures Required

## 7. Handling and Storage

### 1. Personal Precautions

*Safe Handling*                      Ensure there is sufficient ventilation of the area.  
Do not wear contaminated clothing.  
P264: Wash hands thoroughly after handling.  
P273: Avoid release to the environment.

*Protection against explosions and fires*                      P202: Do not handle until all safety precautions have been read and understood.  
P363: Wash contaminated clothing before reuse.

### 2. Conditions for safe storage, including any incompatibilities

*Managing Storage Risks*                      Store in cool, well ventilated area.  
Keep away from sources of ignition.  
Keep container tightly closed.

*Storage Controls*                      No special requirements

*Maintaining Integrity*                      P233: Keep container tightly closed.  
Store away from oxidising agents  
Keep in tightly closed container in cool area away from direct sunlight or heat sources.

*Other advice*                      P403 + P233: Store in a well-ventilated place. Keep container tightly closed.  
P403: Store in a well-ventilated place.  
No further information available.

### 3. Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

## 8. Exposure Controls/Personal Protection

### 1. Control Parameters

No Data Available

## 2. Exposure Controls

<i>General protective and hygiene measures</i>	P280: Wear protective gloves/protective clothing/eye protection/face protection. Wash hands during breaks and at the end of handling the material Immediately remove any contaminated clothing
<i>Engineering measures</i>	Ensure lighting and electrical equipment are not a source of ignition. Use only in a chemicals fume hood.
<i>Eye / Face Protection</i>	Safety Glasses with side-shields.
<i>Hand protection</i>	Protective gloves.
<i>Respiratory protection</i>	P260: Do not breathe dust/fume/gas/mist/vapours/spray. P284: Wear respiratory protection. Use breathing protection with high concentrations
<i>Skin protection</i>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry hands. Protective clothing.
<i>Other personal protection advice</i>	no data

## 9. Physical and Chemical Properties

### 1. Physical and Chemical Properties

Appearance	Liquid
Odour	Pungent
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	-18°C
Initial boiling point and boiling range	152°C
Flash point	92°C
Evaporation rate	No Data Available
Flammability(solid,gas)	No Data Available
Upper/lower flammability or explosive limits	No Data Available
Vapour pressure	95.809hPa at 20°C 195.065hPa at 55°C
Vapour density	5.89-(air=1.0)
Relative density	1.217 @ 20°C
Solubility(ies):	No Data Available
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive properties	No Data Available
Oxidising properties	No Data Available

### 2. Other Information

No additional information available

## 10. Stability and Reactivity

### 1. Reactivity

no unusual reactivity

### 2. Stability

Stable under normal conditions.

### 3. Possibility of Hazardous Reactions

no hazardous reactions known

### 4. Conditions to Avoid

no specific conditions to avoid

### 5. Incompatible Materials

Oxidising agents.

### 6. Hazardous Decomposition Products

In combustion emits toxic fumes.

## 11. Toxicology information

### 1. Information

<i>Acute Toxicity</i>	Oral LD50 (rat) 3000mg/kg Inhalation LD50 (rat) 4h 590mg/m3
<i>Skin corrosion/irritation</i>	strong corrosive effect on skin and mucous membranes
<i>Serious eye Damage/irritation</i>	strong corrosive effect.
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	IARC 2A-Group 2A Probably carcinogenic to humans (Benzyl chloride)
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	not known

### 2. Additional

swallowing will lead to a strong caustic effect on mouth and throat and the danger of perforation of oesophagus and stomach.

## 12. Ecological Information

### 1. Toxicity

not known

### 2. Persistence and degradability

not known

### 3. Bio-Accumulative Potential

not known

### 4. Mobility and Soil

not known

### 5. Results of PBT & vPvB assessment

not known

### 6. Other adverse effects

Water hazard class 2 (self assessment); hazardous for water.

## 13. Disposal Considerations

## 1. Waste Treatment Methods

*Disposal Operations*

*Disposal of Packaging* Disposal must be made according to official regulations.

## 14. Transport Information

### Air (ICAO)

1. **UN Number:** 1739
2. **Shipping Name:** Benzyl chloroformate
3. **Transport hazard class(es):** : 8 Sub Class :



4. **Packing group:** I
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

### Road (ADR)

1. **UN Number:** 1739
2. **Shipping Name:** BENZYL CHLOROFORMATE
3. **Transport hazard class(es):** : 8 Sub Class :



4. **Packing group:** I
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

### Sea (IMDG)

1. **UN Number:** 1739
2. **Shipping Name:** Benzyl chloroformate
3. **Transport hazard class(es):** : 8 Sub Class :



4. **Packing group:** I
5. **Environmental hazards:** Marine Pollutant: 1
6. **Special Precautions for user:**
7. **Transport in bulk:** IBCINS: -  
IBCPPROV: -  
UNTANKINS: -  
TANKPROV: TP2, TP13

## 15. Safety, health, environmental and national regulations

### 1. Safety, health, environmental and national regulations:

product is not subject to any additional regulations or provisions

### 2. Safety Assessment

No Chemical Safety Assessment

## 16. Other Information

### 1. Other Information:

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)  
RID:Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association  
ICAO:International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the ICAO  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CAS:Chemical Abstracts Service

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## 2. Associated risk phrases according to European directive 67/548/EEC

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### 3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.