



## Safety Data Sheet

Date of Issue: 01.10.2020

Date of Expiry: 01.10.2025

### 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**  
Address : PO Box 34125, Birkenhead, Auckland 0746  
Telephone : +64 9 480 4386  
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Emergency phone number : 0800 243 622 (24 hours)

Product	2-Chlorobutane			Code	820281
CAS#	HSNO#	UN #	DG Class/es	Packing group #	
78-86-4	HSR001385	1127	3	II	

Recommended use : Laboratory Investigations

### 2: Hazards identification

#### 2.1 GHS Classification

Flammable Liquids (Category B), H225

#### 2.2 GHS Label elements, including precautionary statements

##### Pictogram



Signal word : **Danger**

##### Hazard statement(s)

H225 : Highly flammable liquid and vapour.

##### Precautionary statement(s)

###### Prevention

P210 : Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 : Keep container tightly closed.  
P240 : Ground/bond container and receiving equipment.  
P241 : Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 : Use only non-sparking tools.  
P243 : Take precautionary measures against static discharge.  
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.

###### Response

P303 + P361 + P353 : IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.  
Rinse skin with water/ shower.  
P370 + P378 : In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

###### Storage

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

###### Disposal

P501 : Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Other hazards - none

### 3: Composition/information on ingredients

Substance / Mixture : Substance

#### 3.1 Substances

Synonyms : sec-Butyl chloride

Formula : C<sub>4</sub>H<sub>9</sub>Cl

Molecular Wt. : 92.57 g/mol

CAS-No. : 78-86-4

EC-No. : 201-151-7

No components need to be disclosed according to the applicable regulations

### 4: First aid measures

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

### 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Small (incipient) fires must be extinguished with alcohol resistant foam, dry chemical powder or carbon dioxide. Large amounts of water are ineffective. Cool containers with large amounts of water.

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

Carbon oxides, Hydrogen chloride gas

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

## **6: Accidental release measures**

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

Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13).

### **6.4 Reference to other sections**

For disposal see section 13.

## **7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Components with workplace control parameters**

We are not aware of any national exposure limit.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protective equipment**

##### **Eye/face protection**

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### **Body Protection**

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

## 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance Form	: clear, liquid
Colour	: colourless
b) Odour	: No data available
c) Odour Threshold	: No data available
d) pH	: No data available
e) Melting point/freezing point	
Melting point/range	: -140 °C - lit.
f) Initial boiling point and boiling range	
	: 68 - 70 °C - lit.
g) Flash point	: -15 °C - closed cup
h) Evaporation rate	: No data available
i) Flammability (solid, gas)	: No data available
j) Upper/lower flammability or explosive limits	: No data available
k) Vapour pressure	: No data available
l) Vapour density	: No data available
m) Relative density	: 0.873 g/cm <sup>3</sup> at 25 °C
n) Water solubility	: No data available
o) Partition coefficient: n-octanol/water	: No data available
p) Auto-ignition temperature	: No data available
q) Decomposition temperature	: No data available
r) Viscosity	: No data available
s) Explosive properties	: No data available
t) Oxidizing properties	: No data available

### 9.2 Other safety information

No data available

## 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas Other decomposition products - No data available  
In the event of fire: see section 5

## 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 17,440 mg/kg

LD50 Dermal - Rabbit - 17,440 mg/kg

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

#### Additional Information

RTECS: EJ6475000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12: Ecological information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

**13: Disposal considerations****13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**14: Transport Information Table**

		<b>ADR/RID – European packaging certification</b>	<b>IMDG International Maritime Dangerous Goods Code</b>	<b>IATA – DGR International Air Travel Association – Dangerous Goods Regulations</b>
14.1	<b>UN Number</b>	1127	1127	1127
14.2	<b>UN Proper Shipping name</b>	CHLOROBUTANES	CHLOROBUTANES	Chlorobutanes
14.3	<b>Transport Hazard Class</b>	3	3	3
14.4	<b>Packaging group</b>	II	II	II
14.5	<b>Environmental Hazards</b>	No	No	No
14.6	<b>Special precautions for user</b>	None		
14.7	<b>Incompatible materials</b>	Strong oxidizing agents, Strong bases		

**15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

HSNO Approval Code: HSR001385

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits

Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

**16: Disclaimer**

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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