

# SLS Select Education - Safety Data Sheet

**CHE5386SE****(in accordance with regulation (EU) 2015/830 and regulation (EC) 1272/2008)**Revision: 2.0  
(Replaces revision 1.1 of 16 April 2021)Revision date: 21 April 2021  
Date printed: 25 January 2022

## Section 1. Identification

**1.1 Product Identifier** CHE5386SE

Product Name 2-CHLOROBUTANE pure 100ml.

CAS Number 78-86-4

REACH Registration No A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.

Molecular Formula  $\text{CH}_3\text{CH}_2\text{CHClCH}_3$  =92.57**1.2 Relevant identified uses of the substance or mixture & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

**1.3 Supplier** SLS Select EducationWilford Industrial Estate  
Ruddington Lane  
Wilford  
Nottingham  
NG11 7EP  
UNITED KINGDOM

Phone 0115 9821111

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Email sales@scientific-labs.com

**1.4 Emergency Telephone** (08:00-17:00) 0115 9821111  
(24hr) 112  
(Have this document to hand)

## Section 2. Hazards Identification

**2.1 Classification of the substance or mixture****Classification according to regulation 1272/2008/EC**

Flammable liquid, category 2

Corrosive to metals, category 1

Hazard to aquatic environment, category 3

H225: Highly flammable liquid and vapour.

H290: May be corrosive to metals.

H412: Harmful to aquatic life with long lasting effects.

**2.2 Label elements****Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms



Hazard Statements Highly flammable liquid and vapour. May be corrosive to metals. Harmful to aquatic life with long lasting effects.

Precautionary Statements Keep away from heat / sparks/open flames/hot surfaces - No smoking. Ground/bond container and receiving equipment. Wear protective gloves / protective clothing / eye protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Store in a well ventilated place. Keep cool.

## Section 3. Composition

### 3.1 Substances

| Component      | CAS No. | EEC No.   | REACH No. | Conc w/w | CLP Classification (1272/2008/CE)             |
|----------------|---------|-----------|-----------|----------|---|
| 2-Chlorobutane | 78-86-4 | 201-151-4 |           | >99%     | Flam. Liq. 2, Met. Corr. 1, Aquatic Chronic 3 |

## Section 4. First Aid

### 4.1 Description of first aid measures

|                                      |   |
|--------------------------------------|---|
| Eyes                                 | Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.   |
| Skin                                 | Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use.   |
| Inhalation                           | Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.                        |
| Ingestion                            | If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Personal protection for first aiders | Wear protective gloves / eye protection.  |

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

No further relevant information available.

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

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

|                     |  |
|---------------------|--|
| Extinguishing Media | Water spray, alcohol resistant foam, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool. |
| Unsuitable Media    | Nothing specified.   |

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

|         |                                    |
|---------|------------------------------------|
| Hazards | Vapour-air mixtures are explosive. |
|---------|------------------------------------|

### 5.3 Advice for firefighters

|                         |  |
|-------------------------|--|
| Advice for firefighters | Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. |
|-------------------------|--|

## Section 6. Accidental Release Measures

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

|                     |   |
|---------------------|---|
| Personal Protection | Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots. |
|---------------------|---|

### 6.2 Environmental precautions

|               |  |
|---------------|--|
| Environmental | Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs. |
|---------------|--|

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

- Major Spillage Cover with an activated carbon adsorbent. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete. Use non-metallic tools only.
- Minor Spillage Cover with an activated carbon adsorbent. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete. Use non-metallic tools only.

### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

- Keep containers closed when not in use. Wash thoroughly after handling.
- Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

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

Well ventilated, cool, dry storage. Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Keep well separated from oxidising agents.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

| Component      | CAS No  | Concentration | Workplace Exposure Limits |                         |
|----------------|---------|---------------|---------------------------|-------------------------|
|                |         |               | Long Term (8hr TWA)       | Short Term 15min period |
| 2-Chlorobutane | 78-86-4 | >99%          | -                         | -                       |

Exposure data source(s) No occupational exposure data currently available.

### 8.2 Exposure controls

- Respiratory Protection Use only in a chemical fume hood.
- Hand Protection Use solvent resistant gloves.
- Eye Protection Use tightly fitting chemical splash proof glasses or goggles.
- Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.
- Special Hazards No special precautions required.

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

- Appearance Clear colourless liquid.
- Odour Fresh and characteristic.
- pH Not applicable
- Boiling Point 68-70°C
- Melting Point -140°C
- Flash Point -15°C (Closed cup)
- Upper Flammable Limit Not applicable
- Lower Flammable Limit Not applicable
- Auto Ignition Not applicable
- Explosive Properties The vapours will form explosive mixtures with air.
- Oxidising Properties No.
- Vapour Pressure Not applicable
- Relative Density 0.8730
- Water Solubility 0.1%

### 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

|      |                                    |   |
|------|------------------------------------|---|
| 10.1 | Reactivity                         | No data available.  |
| 10.2 | Chemical Stability                 | Stable under normal conditions  |
| 10.3 | Possibility of hazardous reactions | No data available.  |
| 10.4 | Conditions to Avoid                | Hot surfaces, naked flames or other sources of ignition.                                    |
| 10.5 | Incompatible Materials             | Strong oxidising agents. Alkalis.   |
| 10.6 | Hazardous Decomposition Products   | In combustion emits toxic fumes of Hydrogen chloride gas, carbon dioxide & carbon monoxide. |

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

|                      |   |
|----------------------|---|
| Eyes                 | The liquid may be irritating to the eyes.   |
| Skin                 | The liquid may be harmful if absorbed through the skin.   |
| LD50 Skin            | 20ml/kg Rabbit  |
| Ingestion            | May be harmful by ingestion.  |
| LD50 Oral            | 20ml/kg Rat   |
| Inhalation           | Harmful by inhalation.  |
| LD50 Inhalation      | Not available   |
| TCLo                 | 8000ppm   |
| Carcinogenicity      | Possible Carcinogen.  |
| Mutagenicity         | Not considered to be a mutagen.   |
| Reproductive Effects | None identified.  |
| Other Information    | To the best of our knowledge, the chemical, physical, & toxicological properties have not been thoroughly investigated. |

## Section 12. Ecological

|      |                                  |                              |
|------|----------------------------------|------------------------------|
| 12.1 | Toxicity                         | No data available.           |
|      | LC50 Algal                       | 67 mg/L Algae (72 hours)     |
|      | LC50 Crustacea                   | 99,9 mg/L Daphnia (24 hours) |
|      | LC50 Fish                        | 75.5 mg/L Fish (48 hours)    |
| 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 & vPvB assessment | Assessment not required.     |
| 12.6 | Other adverse effects            | None known at present.       |

## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

|                        |   |
|------------------------|---|
| Disposal Methods       | Burn in a chemical incinerator equipped with afterburners and scrubbers. Exert extra care in igniting as this material is highly flammable. |
| Contaminated Packaging | Dispose of via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.    |

## Section 14. Transport Information

|                                   |                                  |
|-----------------------------------|----------------------------------|
| 14.1 UN Number                    | 1127                             |
| 14.2 Proper Shipping Name         | Chlorobutanes                    |
| 14.3 Transport classes            |                                  |
| UN classification                 | 3                                |
| Subsidiary hazard(s)              | None                             |
| Transport category                | 2                                |
| ADR Hazard ID                     | 33                               |
| Tunnel Restriction Code           | D/E                              |
| 14.4 Packing Group                | II                               |
| 14.5 Environment hazards          | See section 12.                  |
| 14.6 Special precautions for user | No special precautions required. |
| 14.7 Transport in bulk            | Not transported in bulk.         |



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

#### Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Flammable liquid, category 2; Corrosive to metals, category 1; Hazard to aquatic environment, category 3

Signal word Danger

Hazard Pictograms



Hazard Statements H225, H290, H412  
Highly flammable liquid and vapour. May be corrosive to metals. Harmful to aquatic life with long lasting effects.

Precautionary Statements P210, P240, P280, P303+P361+P353, P403+P235  
Keep away from heat / sparks/open flames/hot surfaces - No smoking. Ground/bond container and receiving equipment. Wear protective gloves / protective clothing / eye protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Store in a well ventilated place. Keep cool.

### 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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