 <b>SITARA</b> CHEMICAL INDUSTRIES LTD	<b>SAFETY DATA SHEET (SDS)</b>	
	<b>CARBON DIOXIDE</b>	
	Document #: <b>SCIL-SDS-16</b>	Issue Date: <b>01-Jan-23</b>
	Revision: <b>0</b>	Next Rev: <b>31-Dec-27</b>

## 1. IDENTIFICATION

- 1.1 Product identifier:** Carbon dioxide
- Synonym(s):** Liquid Carbon dioxide
- Reach No.** A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
- CAS No.** 124-38-9
- 1.2 Recommended use:** Laboratory chemicals, Manufacture of substances
- Restrictions on use:** Not determined.
- 1.3 Details of the supplier of the Safety data sheet Manufacturer**
- Company Name** Sitara Chemical Industries Ltd.
- Address:** 32-K.M, Sheikhpura Road, Faisalabad
- Telephone Number:** (+92) 041-4689141-5
- Emergency Number** (+92) 041-4689141-5 (Ext.1161)
- Website** <http://www.sitara.com.pk>

## 2. HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or Mixture.**  
Classification according to Regulation (EC) No 1272/2008  
Gases under pressure (Liquefied gas), H280
- 2.2 Label Elements**  
Labelling according Regulation (EC) No 1272/2008

**Pictogram**




Single word      Warning

Hazard statement(s)  
H280      Contains gas under pressure; may explode if heated.

Precautionary statement(s)  
P410 + P403      Protect from sunlight. Store in a well-ventilated place

Supplemental Hazard Statements      None

- 2.3 Other hazards:**  
This substance/mixture contains no components considered to be persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Formula : CO<sub>2</sub>  
 Molecular weight : 44.01 g/mol  
 CAS- No. : 124-38-9  
 EC-No. : 204-696-9

Component	Classification	Concentration
Carbon dioxide		
	Press. Gas Liquefied gas; H280	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 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:

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. FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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


Carbon oxides

#### 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.

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## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**  
 Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.  
 For personal protection see section 8.
- 6.2 Environmental precautions.** Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up**  
 Clean up promptly by sweeping or vacuum.
- 6.4 Reference to other sections:**  
 For disposal see section 13.

## 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling**  
 For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities**  
 Keep container tightly closed in a cool, dry and well-ventilated place. Contents under pressure. Avoid heating above: 50 °C.
- 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
- 8.2 Exposure controls**
- Personal protective equipment**
- Eye/face protection:** Use equipment for eye protection.
- Skin protection:**  
 Handle with gloves. Use proper glove removal technique to avoid skin contact with this product. Wash and dry hands.
- Body Protection:**  
 Impermeable clothing, 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 respirator with multi-purpose combination respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
- Control of environmental exposure** Do not let product enter drains.

## 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties**
- Appearance**
- Physical state / Form:** Form: Liquefied gas
- Color:** No data available
- Odor:** No data available
- pH :** No data available
- Melting point/freezing point:** Melting point/range: -78,5 °C - lit.



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<b>Initial boiling point and boiling range:</b>	No data available
<b>Flash Point:</b>	No data available
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	No data available.
<b>Vapor pressure:</b>	57.249 hPa at 20 °C
<b>Vapor density:</b>	1,52 - (Air = 1.0)
<b>Relative density:</b>	No data available
<b>Solubility in water:</b>	No data available
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b> Viscosity, kinematic / dynamic	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties,</b>	No data available

#### 9.2 Other safety information:

Relative vapor density 1,52 - (Air = 1.0)

### 10. Chemical Stability & Reactivity Information

- 10.1 Reactivity:** No data available
- 10.2 Chemical Stability:** The product is chemically stable under standard ambient conditions.
- 10.3 Possibility of hazardous reactions:** No information available.
- 10.4 Conditions to avoid:** No data available
- 10.5 Incompatible Materials:** No data available
- 10.6 Hazardous Decomposition Products:**  
Hazardous decomposition products formed under fire conditions. - Carbon oxides.  
Other decomposition products - No data available

### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

<b>Acute toxicity:</b>	No data available
<b>Skin corrosion/irritation:</b>	No data available
<b>Serious eye damage/eye irritation:</b>	No data available
<b>Respiratory or skin sensitization:</b>	No data available
<b>Germ cell mutagenicity:</b>	No data available

#### **Carcinogenicity:**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**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

#### 11.2 Additional Information

Nausea, Dizziness, Headache, Low to medium concentrations of carbon dioxide can:, affect regulation of blood circulation, affect the acidity of body fluids, respiratory difficulties, At high concentrations:, Breathing difficulties, Increased pulse rate, change in body acidity, Very high concentrations can cause:, Unconsciousness, death

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

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### 12. ECOLOGICAL INFORMATION

- 12.1 Toxicity** No data available
- 12.2 Persistence and degradability** No data available
- 12.3 Bio accumulative potential:** No data available
- 12.4 Mobility in soil:** No data available
- 12.5 Results of PBT and vPvB assessment**  
This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.
- 12.6 Other adverse effects** No data available.

### 13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods**
- Product**  
Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated packaging**  
Dispose of as unused product.

### 14. TRANSPORT INFORMATION

- 14.1 UN number**  
ADR/RID: 1013      IMDG: 1013      IATA: 1013
- 14.2 UN proper shipping name**  
ADR/RID:              CARBON DIOXIDE  
IMDG:                 CARBON DIOXIDE  
IATA:                  Carbon dioxide
- 14.3 Transport hazard class (es)**  
ADR/RID: 2.2         IMDG: 2.2         IATA: 2.2
- 14.4 Packaging group**  
ADR/RID: -            IMDG: -            IATA: -
- 14.5 Environmental hazards**  
ADR/RID: No         IMDG Marine pollutant: No      IATA: no
- 14.6 Special precautions for user:** No data available

### 15. REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**  
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
- 15.2 Chemical Safety Assessment:** A Chemical Safety Assessment was not carried out for this substance.

### 16. LABELING INFORMATION

Full text of H-Statements referred to under sections 2 and 3.  
H280 Contains gas under pressure; may explode if heated

**Disclaimer:**

All information given in this data sheet by the company's technical staff is compiled based on data available at this time. The company accepts no responsibility whatsoever for its accuracy or for any results which may be obtained by customers. Any customer who relies upon any advice or information given in this data sheet by the company or by its technical staff does so entirely at its own risk and the company will not be liable for any loss or damage thereby suffered notwithstanding any want of care on the part of the company or its staff in compiling or giving the advice or information.