

Carbon Dioxide, solid

UN	1845
CLASS	9

T E C H S P E C S

COMPOSITION	SIZE	WEIGHT	SUPPLY
BLOCK	250 X 230 X 150mm	15 kg	Wrapped / Boxed
SLICED	230 x 100 x 75mm 200 x 100 x 20mm	2.0 kg 0.7 kg	Wrapped / Boxed Wrapped / Boxed
PELLETS	15 or 8mm diameter		Drum or box

NOTE: Sizes may vary as required.
The above data is typical of the most common supply.

SPECIFICATION

Carbon Dioxide,solid 100%

PHYSICAL DATA

Chemical Symbol CO₂
Relative Density (Air = 1) 1.53
Molecular Weight 44.01
Sublimation Point -78.5°C
Critical Temperature 31.0°C
Specific Volume (@101.3 kPa & 15°C) 0.535 m³/kg
Flashpoint Non-flammable

PROPERTIES

Carbon Dioxide,solid (Dry Ice) is a waxy white,solid with a sharp odour. It is produced by the compression of CO₂ snow into a solid



USES

Carbon Dioxide, solid is used for the transportation and storage of food products such as meat, poultry, cold meats, pastries, ice cream, eggs, milk, butter, fish, shellfish and frozen foods.

Other uses include rubber deflashing, industrial cooling, freeze branding, theatrical effects and medical applications such as freezing of blood plasma and pharmaceuticals.

It is widely used for airfreight cargo distribution, airline catering, cloud seeding, pipe freezing and shrink fitting.

HAZARDS

Inhalation of carbon dioxide in high concentration is dangerous to respiration. At very high concentrations leads to loss of consciousness, and eventually death.

It is a low temperature solid and will cause cold burns if brought into contact with the skin.

TECH SPECS

HANDLING & SAFETY

MATERIALS COMPATIBILITY

Carbon Dioxide is non-corrosive and so any common metal is acceptable. Equipment to handle solid carbon dioxide must be constructed of suitable materials for the low temperature encountered. It must NOT be gas tight.

PRECAUTIONS IN USE

Adequate local exhaust and dilution (general) ventilation and the supply of sufficient replacement air to maintain the oxygen concentration in the atmosphere above 18% should be provided.

Do not use in cellars, confined areas etc.

Do not place in gas tight containers. As it sublimates, dry ice converts to gas and build up of pressure may shatter a rigid container.

PERSONAL PROTECTION

Personnel handling solid carbon dioxide should be provided with gloves and protective clothing, e.g. apron and face shield, to prevent frostbite or cold burns.

TRANSPORT

Solid carbon dioxide is supplied in pellets, slices and blocks of various sizes up to 15kg. It is normally transported in "low loss" cooler boxes.

Solid carbon dioxide must NOT be transported inside a closed vehicle.

SPILLS & DISPOSAL

Ventilate area. Allow gas to dissipate to atmosphere.

FIRST AID

If victim is conscious:

- Move to uncontaminated area to breathe fresh air.
- Keep warm and quiet.

If victim is unconscious:

- Move to uncontaminated area and give assisted respiration.
- When normal breathing is restored, treatment as above.

Continued treatment should be symptomatic and supportive.

In event of cold burn:

- Flood area with cool water.
- Apply sterile compress.

ADDITIONAL INFORMATION

The information, recommendations and data contained in this publication are intended to give basic guidance to users of Air Liquide gases for their safe handling and use.

Material Safety Data Sheets (MSDS) for gases and gas mixtures supplied by Air Liquide are also available.

It is essential for the safe use of gases that personnel are properly trained and are fully aware of the possible hazards.

Further information and advice on any matter relating to the safe handling or use of these products may be obtained from the nearest Air Liquide office.