



## MATERIAL SAFETY DATA SHEET: CARBON DIOXIDE FIRE EXTINGUISHERS

### 1. MANUFACTURERS DETAILS

Manufacturer 's Name	DELEI FIRE FIGHTING EQUIPMENT MANUFACTORY
Address	Southwest New Development Zone Huzhou Zhejiang China
Telephone No.	+86-572-2612688
Product name	Carbon Dioxide Extinguisher
Chemical Family	Gas (Non Metallic Oxide)

### 2. COMPOSITION OF INGREDIENTS

Extinguisher	Cylinder made from Carbon Steel / Steel Alloy / Aluminium
	Discharge Valve with a safety bursting disc
	Siphon Tube
	High pressure hose and horn
	SABS approved labelling
Inside Ingredients	CO <sup>2</sup> (Carbon Dioxide) Gas

### 3. HAZARDS IDENTIFICATION

Hazards Identification	Liquefied Gas
	In high concentrations may cause asphyxiation

### 4. EMERGENCY AND FIRST AID PROCEDURES

Eye/ skin contact	Immediately flush eyes out with plenty of water for at least 15 minutes while holding lids open. If redness, itching or a burning sensation develops, get medical attention.
	Treat for frostbite if necessary.
Inhalation	In high concentrations may cause asphyxiation. Symptoms may include loss of mobility / consciousness. Victim may not beware of asphyxiation. Low concentrations of O <sub>2</sub> cause increased respiration and headache.
	Remove victim from contaminated area wearing a self contained breathing apparatus Keep victim warm and rested.
	Call a doctor. Apply artificial respiration if breathing stopped.
Ingestion	Not an expected route of entry

### 5. FIRE FIGHTING MEASURES

Specific Hazards	Exposure to fire may cause containers to rupture / explode
	Non flammable
Hazardous combustion products	None
Suitable extinguishing media	All known extinguishers can be used
Specific methods	If possible, stop flow of product, move away from containers and cool with water from a protected position
Special protective equipment for fire fighters	In confined spaces use self contained breathing apparatus

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Personal	Evacuate area
	Wear self contained breathing apparatus when entering area unless atmosphere is proved to be safe
	Ensure adequate air ventilation
Environmental precautions	Try to stop release
	Prevent from entering sewers, basements, and work pits or any place where accumulation can be dangerous
Clean up methods	Ventilate area

**7. STORAGE**

Handling and storage	Do not allow back feed into the container.
	Use only properly specific equipment which is suitable for this product, it's supply pressure and temperature.
	Contact gas supplier if in doubt
	Keep container below 50°C in a well ventilated place.

**8. SPECIAL PROTECTION INFORMATION**

Exposure limit value	5000ppm
	Ensure adequate ventilation

**9. PHYSICAL AND CHEMICAL CHARACTERISTICS**

Molecular Weight	44
Melting point	-56.6°C
Boiling Point	-78.5(s)°C
Critical Temperature	30°C
Relative density gas	1.52 (air=1)
Relative density liquid	0.82 (water=1l)
Vapour pressure	57.3bar
Solubility in water	200mg/l
Appearance	Colourless gas
Odour	No odour warning properties
Other data	Gas / vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

**10. STABILITY AND REACTIVITY**

Stability and reactivity	Stable
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General	In high concentrations cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting which may lead to unconsciousness
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**12. ECOLOGICAL INFORMATION**

General	When discharging in large quantities may contribute to the greenhouse effect
Global warming factor	1

**13. DISPOSAL CONSIDERATIONS**

	Do not discharge into any place where its accumulation could be dangerous. To atmosphere in a well ventilated place Discharge to atmosphere in large quantities should be avoided.
	Contact supplier if guidance is required
Complete or damaged extinguishers	Contact your local SANS1475 compliant fire service company.

**14. TRANSPORTATION INFORMATION**

Proper shipping Name	Carbon Dioxide
UN Nr	1013
Class / Div	2.2
ADR/RID classification code	2.2°A
ADR/RID Hazard Nr.	20
Labelling ADR	Label 2: non flammable non toxic gas
Other transport information	A void transport on vehicles where the load space is not separated from the driver's compartment.
	Ensure that the driver is aware of the potential hazard s of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers ensure that they are firmly secured and
	- Cylinder valve is closed and not leaking
	- Valve outlet cap nut or plug (where provided) is correctly fitted
	- Valve protection device (where provided) is correctly fitted
	- There is adequate ventilation
	- Compliance with applicable regulations

**15. REGULATORY INFORMATION**

Carbon Dioxide Fire Extinguishers	Are classified and regulated by SABS Directives, and must comply to SANS1567 Certification.
Labels	All labels and markings on Carbon Dioxide Fire Extinguishers re classified and regulated by SABS Directives, and must comply to SANS1567 Certification.



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**16. ADDITIONAL INFORMATION**

	Contact with liquid may cause cold burns/frost bite
	The hazard of asphyxiation is often overlooked and must be stressed during operator training
Use of Fire Extinguishers	Pictograms are attached for the use of the extinguisher.
Recommendations	It is recommended that Personnel are trained in the use of fire extinguishers.
Owner	Where public access or personnel are involved it becomes the responsibility of the owner to make sure such equipment complies with SANS1567 and the local fire department requirements. Fire extinguishers are required to be serviced annually by a registered technician employed by a SANS1475 compliant company.