



## Safety Data Sheet for Liquid CO2

1. PRODUCT AND COMPANY IDENTIFICATION		
TRADE NAME	Liquid Carbon Dioxide	
RECOMMENDED USE	Fire Fighting Agent	
MANUFACTURER	Yara Industrial	
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2. COMPOSITION / INFORMATION ON INGREDIENTS		
CHEMICAL NAME	CAS NO	CONTENT %
Carbon Dioxide	124-38-9	100%
3. HAZARDS IDENTIFICATION		
The substance is not classified as dangerous according to Directive 67/548/EEC and its amendments		
ADDITIONAL HAZARDS		
<p>Liquefied Gas. Acts as a simple asphyxiant. Can displace the normal air and cause suffocation from lack of oxygen. The vapour / gas is heavier than air and will spread along the ground. Extremely cold material. Can cause burns similar to</p> <p>See section 11 for more detailed information on health effects and symptoms.</p>		
4. FIRST AID MEASURES		
AFTER SKIN CONTACT	In case of contact with liquid, warm frozen tissue with water and get medical attention	
AFTER EYE CONTACT	Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Get medical attention immediately	
AFTER INHALATION	If inhaled, remove to fresh air. If breathing is difficult, give oxygen. In all cases of doubt or when symptoms persist, seek medical attention	
AFTER SWALLOWING	Not applicable	

<b>5. FIRE FIGHTING MEASURES</b>	
EXTINGUISHING MEDIA	The product itself has fire-extinguishing properties. Extinguish the fire using a suitable agent for surrounding the fire
SPECIAL EXPOSURE HAZARDS	Container explosion may occur under fire conditions or when heated. Fire fighters should wear positive pressure self-contained breathing apparatus (SCUBA) and full turnout gear
HAZARDOUS THERMAL DECOMPOSITION PRODUCTS	These products are carbon oxides (CO, CO <sub>2</sub> )
<b>6. ACCIDENTAL RELEASE MEASURES</b>	
PERSONAL PRECAUTIONS	Use suitable protective equipment (section 8). Follow all fire-fighting procedures (Section 5)
ENVIRONMENTAL PROTECTION	Stop leak if without risk. Prevent entry to sewers, basements or confined areas. Watch for accumulation in low, confined areas. CO <sub>2</sub> can displace the normal air and cause suffocation from lack of oxygen.
Note: See section 8 for personal protective equipment and section 13 for waste disposal	
<b>7. HANDLING AND STORAGE</b>	
HANDLING	Avoid contact with eyes, skin and clothing. Acts as a simple asphyxiant. Can displace the normal air and cause drowsiness, dizziness and nausea. See section 11 for more detailed information on health effects and symptoms
STORAGE	Storage should be in a defined, ventilated, segregated and approved area designed for the purpose. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective Occupational Exposure Limits (OEL)
SPECIFIC MEASURES	Liquid carbon dioxide (also valid for compressed carbon dioxide) must never be used to rinse tanks, containers or equipment containing flammable liquids/gases, particulates or dust. Risk of explosion in presence of static discharge. If carbon dioxide gas is used to rinse equipment, tanks or containers, take precautionary measures against static discharges
<b>8. EXPOSURE CONTROL AND PERSONAL PROTECTION</b>	
INGREDIENT NAME	OCCUPATIONAL EXPOSURE LIMITS
Carbon Dioxide	EH40-WEL (United Kingdom (UK), 1/2005). STEL: 2740 mg/m <sup>3</sup> 15 Minutes.    Form: All Forms STEL: 15000ppm    15 Minutes.    Form: All Forms TWA: 9150 mg/m <sup>3</sup> 8 Hours.    Form: All Forms TWA: 5000ppm    8 Hours.    Form: All Forms
<b>EXPOSURE CONTROLS</b>	
RESPIRATORY PROTECTION	Use a properly fitted, air purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator
HAND PROTECTION	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary

## 8. EXPOSURE CONTROL AND PERSONAL PROTECTION CONTINUED

EYE PROTECTION	Use safety eyewear designed to protect against splashing of liquids
SKIN PROTECTION	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wash hands, forearms and face thoroughly after handling chemical products, before eating, drinking smoking or using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FOAM	Liquefied Gas
COLOUR / ODOUR	Colourless
ODOUR	Orourless
MELTING / FREEZING POINT	Sublimation temperature: -78.5°C (-109.3°F)
DENSITY g/cm <sup>3</sup>	1.03g/cm <sup>3</sup> (-20°C / -4°F)
SOLUBILITY	Very slightly soluble in water
SOLUBILITY (at 20°C)	1.688g/l (in water)
VAPOUR DENSITY	1.53 (air = 1)
CRITICAL TEMPERATURE	30.9°C (87.6°F)

## 10. STABILITY AND REACTIVITY

STABILITY	Stable under recommended storage & handling conditions (See section 7)
HAZARDOUS DECOMPOSITION PRODUCTS	These products are carbon oxides (CO, CO <sub>2</sub> ).

## 11. TOXICOLOGICAL DATA

POTENTIAL ACUTE HEALTH EFFECTS	Adverse health effects are considered unlikely, when the product is used according to directions. Over-exposure Signs / Symptoms
TARGET ORGANS	Causes damage to the following organs: Lungs, cardiovascular system, skin, eyes, central nervous system
OTHER ADVERSE EFFECTS	Extremely cold material. Can cause burn similar to frostbite. Additional Information: Acts as a simple asphyxiant: symptoms include headache, dizziness, fatigue, drowsiness and in extreme cases, loss of consciousness. Potential suffocation hazard

## 12. ECOLOGICAL DATA

The product is not expected to harm the environment when used properly according to directions

<b>13. DISPOSAL CONSIDERATIONS</b>	
METHODS OF DISPOSAL	With adequate ventilation and otherwise under conditions where the low temperature will NOT present a hazard or problem, the liquid may be allowed to evaporate. A cold "fog", heavier than air, will be formed. Do not puncture or incinerate container. Dispose of in accordance with all applicable local and national regulations
HAZARDOUS WASTE	Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC
<b>14. REGULATORY INFORMATION</b>	
<b>EU REGULATIONS</b>	
RISK PHRASES	This product is not classified according to EU Legislation
PRODUCT USE	Industrial Applications
Classification and labelling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (Including amendments) and the intended use	

# UltraFire

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