



Company:	M P S M & Bull Partnership - HR2 6JF
Substance(s) being Assessed:	Carbon Dioxide Extinguisher
Where is substance used?:	Warehouse/Vehicles/Customer Sites
COSHH Reference Number:	Carbon Dioxide
Safety Data Sheet Ref. No.:	Carbon_Dioxide_Datasheet
Emergency Contact Number:	01432 371170
Date of Assessment:	04/11/2011

## Carbon Dioxide Extinguisher

### What is the substance used for?

Fire fighting equipment to be used on Class E fires (Energised Electrical Equipment), limited use on Class A (Wood, Paper, Plastic) and Class B (Flammable & Combustible Liquids) fires.

### CHEMICAL PRODUCT/COMPANY IDENTIFICATION

#### Material Identification

Product Name: Liquid Carbon Dioxide

Chemical Name: Carbon Dioxide

Synonyms: CO<sub>2</sub>

Company: Bull Products

### COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name: Carbon Dioxide

CAS Number: 124-38-9, 100%, EC Number 204-696-9, Classification Ingredient - Not Classified

## Substance Hazards:



## HAZARDS IDENTIFICATION

The substance is not classified as dangerous according to Directive 67/548/EEC and its amendments.

Additional Hazards - 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 frostbite.

## PHYSICAL AND CHEMICAL PROPERTIES

General information:

Appearance

Physical state : Gas (Liquefied gas)

Colour : Colourless

Odour : Odourless

Important health, safety and environmental information

Melting/freezing point : Sublimation temperature: -78.5°C (-109.3°F)

Density g/cm<sup>3</sup> : 1.03 g/cm<sup>3</sup> (-20°C/ -4°F)

Solubility : Very slightly soluble in cold water

Solubility (at 20°C) : 1.688g/l (in water)

Vapour density : 1.53 (Air = 1)

Critical temperature : 30.9°C (87.6°F)

## STABILITY AND REACTIVITY

Stability - stable under recommended storage and handling conditions

Hazardous decomposition products - These products are carbon dioxides CO, CO<sub>2</sub>)

## TOXICOLOGICAL INFORMATION

Potential acute health affects - 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 (CNS)

Other advise affects - Extremely cold material. Can cause burns similar to frostbite.  
Additional Information - Acts as a simple asphyxiant. Symptoms and signs include headache, dizziness, fatigue, drowsiness (between 4 and 5 vol%) and in extreme cases, loss of unconsciousness (between 6 and 8%). Potential suffocation hazard.

#### ECOLOGICAL DATA

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

#### Workplace Exposure Limit:

See Exposure Controls

#### Routes of Exposure:



#### Exposure Guidelines

##### Occupational Exposure Limits

EH40-WEL (United Kingdom (UK), 1/2005)

STEL: 27400 mg/m<sup>3</sup> 15 minute(s). Form: All forms

STEL: 15000 ppm 15 minute(s). Form: All forms

TWA: 9150 mg/m<sup>3</sup> 8 hour(s). Form: All forms

TWA: 5000 ppm 8 hour(s). Form: All forms

Recommended monitoring procedures

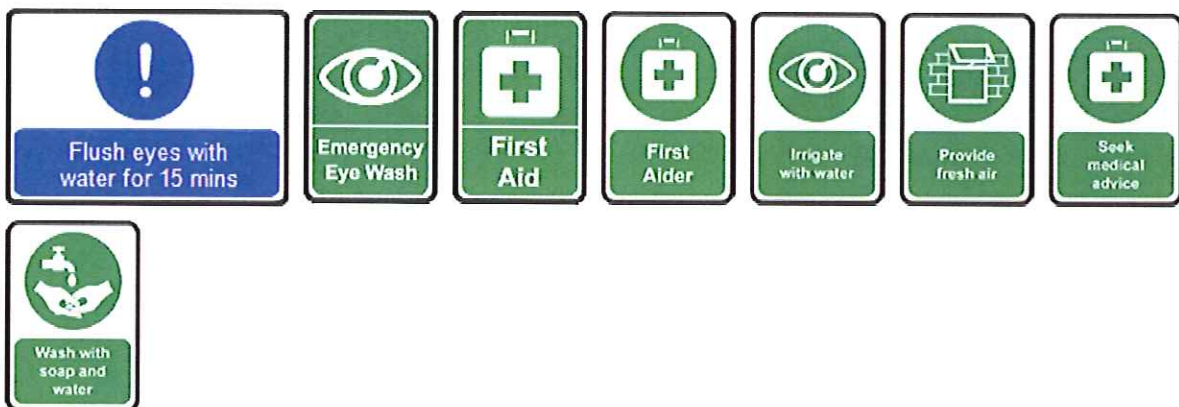
#### Who might be harmed?

All Staff

## Control Measures:



## First aid and Fire:



### FIRST AID MEASURES

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.

Ingestion - Not applicable

Skin contact - In case of contact with liquid, wash affected tissues with water and get medical attention.

Eye contact - Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Get medical attention immediately.

### FIRE FIGHTING MEASURES

Extinguishing media - The product itself has fire-extinguishing properties. Extinguish fire using an agent suitable 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 (SCBA) and full turnout gear.

Hazardous thermal decomposition products - These products are carbon dioxides (CO, CO<sub>2</sub>).

## Storage, Disposal & Spillage:



### ACCIDENTAL RELEASE MEASURES

Personal precautions - Use suitable protective equipment. Follow all fire-fighting procedures.

Environmental precautions and clean-up methods - Stop leak if without risk. Prevent entry into sewers, basements or confined areas. Watch for accumulation in low confined areas. Can displace the normal air and cause suffocation from lack of oxygen.

### HANDLING AND STORAGE

Handling - Avoid contact with the eyes, skin and clothing. Acts as a simple asphyxiant. Can displace the normal air and cause suffocation from lack of oxygen. Inhalation may cause headaches, dizziness, drowsiness 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.

Specific users - 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.

### DISPOSAL CONSIDERATIONS

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.

### TRANSPORT INFORMATION

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/ECC (including amendments) and the intended use.

## Personal Protective Equipment:



### PERSONAL PROTECTION

Respiratory protection - Use a properly filled, 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.

Eye protection - Recommended: Use safety eye wear designed to protect against splash 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, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

The calculated risk factor for this task/operation is **12** (Probability: 3 x Severity: 4)

This is classed as a **MEDIUM** risk

### Additional Measures:

None Required

### Operating Procedures:

#### OTHER INFORMATION

This is taken from the suppliers Material Safety Data Sheet, version 1.02, dated 23.03.2006

**Review Date:** 04/11/2012

**Name of Assessor:** Ann-Marie Bishop

**Position:** HR and Quality Manager

**Signature/s:**  .....

**Date:** 11/11/2011 .....

