



**Material
Safety Data Sheet
CARBON DIOXIDE
EXTINGUISHER
MSDS No.: AJT151030173E**

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifiers

Product Name: Carbon Dioxide extinguisher

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Fire extinguisher

Details of the supplier of the safety data sheet

Company Name: ZHEJIANG ORIENTX FIRE SAFETY EQUIPMENT CO., LTD

Address: WUCHEYAN, HUANGJIABU, YUYAO CITY, ZHEJIANG PROVINCE, 315466, CHINA

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

H280: Gas under pressure – liquefied gas, H280

Simple Asphyxiant

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Contents under pressure; may explode if heated.

May displace oxygen and cause rapid suffocation.

Precautionary Statements

Prevention

Do not enter confined space unless adequately ventilated.

In case of inadequate ventilation wear respiratory protection.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Substance



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Ingredients Name	Content/%	CAS No.	EINECS No.	Classification (67/548/EEC)	Classification (1272/2008/EC)
Barrel material	-	-	-	-	-
Carbon Dioxide	>99.8	124-38-9	204-696-9	-	H280: Non Flammable Gas

Note:

- 1: This MSDS is prepared mainly according to Carbon Dioxide inside the extinguisher.
- 2: Full text of risk phrases & H-Statements appearing in section 3: see section 16.
- 3: This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of the product.

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Gently warm affected areas. Obtain medical attention if frostbite or blistering occurs or redness persists.

Ingestion

Ingestion is not considered a potential route of exposure.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians

In case of frostbite, place the frostbitten part in warm water. If warm water is not available or impractical to use, wrap the affected parts gently in blankets. DO NOT USE HOT WATER.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Carbon Dioxide is used as an extinguishing agent and therefore is not a problem when trying to control a blaze. Use extinguishing agent appropriate to other materials involved. Keep containers and surroundings cool with water spray as



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containers may rupture or burst in the heat of a fire.

Specific hazards arising from the chemical

Containers may explode in heat of fire.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Remove leaking barrel to a safe place. Ventilate the area. Leaks inside confined spaces may cause suffocation as oxygen is displaced and should not be entered without a self-contained breathing apparatus.

Environmental Precautions

None - Material is a normal atmospheric gas.

Methods and materials for containment and cleaning up

None - Material evaporates.

7. HANDLING AND STORAGE

Precautions for safe handling

Containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll containers. Do not drop containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the containers.

Conditions for safe storage

Store away from sources of heat or ignition. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Carbon Dioxide

ACGIH TLV: 5000 ppm (9000 mg/m³) STEL: 30,000 ppm (54,000 mg/m³)

OSHA PEL: 5000 ppm (9000 mg/m³)

Appropriate engineering controls

Use with adequate ventilation (natural or mechanical), especially in a confined space.

Individual protection measures



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Respiratory Protection

Not normally required. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.

Skin Protection

Gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State

Liquefied gas under pressure

Color

Colorless

Odor

Odorless to Slightly Acidic

Odor Threshold

No data available

pH

Not applicable

Specific Gravity

1.522

Boiling Range/Point (°C/F)

-56.6°C/-69.8 °F

Melting Point (°C/F)

-78.5°C/109.2 °F (sublimation)

Flash Point (PMCC) (°C/F)

Not flammable

Vapor Pressure

838 psig @70°F and 1 atmosphere

Evaporation Rate (BuAc=1)

Not applicable

Solubility in Water

Soluble

Vapor Density (Air = 1)

Heavier than air.

VOC (%)

Not applicable

Partition coefficient (n-octanol/water)

No data available

Viscosity

Not applicable

Auto-ignition Temperature

No data available

Decomposition Temperature

No data available

Upper explosive limit

Not explosive

Lower explosive limit

Not explosive

Flammability (solid, gas)

Not flammable

10. STABILITY AND REACTIVITY



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Reactivity

Containers may rupture or explode if exposed to heat.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Extremely high temperatures - contact with incompatible materials

Incompatible Materials

Powdered metals (ex. aluminum, zinc, etc.) - strong oxidizing agents – alkalis

Hazardous Decomposition Products

In contact with moisture will generate carbonic acid.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Simple asphyxiant. LCLo (inhalation in humans): 90,000ppm/ 5 minutes.

Specific Target Organ Toxicity (STOT) – single exposure

Exposure to carbon dioxide vapor at high concentrations can cause loss of consciousness which may prove fatal due to suffocation as it displaces oxygen. Symptoms may include light headedness, dizziness, difficulty with breathing, drowsiness, nausea, mental confusion, increased blood pressure and increased respiratory rate.

Specific Target Organ Toxicity (STOT) – repeat exposure

No data available.

Serious Eye damage/Irritation

Direct contact with the cold gas or liquid can cause freezing of exposed tissues.

Skin Corrosion/Irritation

Direct contact with the cold gas or liquid can cause freezing of exposed tissues.

Respiratory or Skin Sensitization

Available data indicates this product is not expected to cause skin or respiratory sensitization.

Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity

Available data indicates this product is not expected to be mutagenic.

Reproductive Toxicity

Available data indicates this product is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard

Not an aspiration hazard.



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12. ECOLOGICAL INFORMATION

Ecotoxicity

LC₅₀ (Rainbow trout) 60mg/l 96 hr

Mobility in soil

Carbon dioxide occurs naturally in the atmosphere.

Persistence/Degradability

Carbon dioxide occurs naturally in the atmosphere.

Bioaccumulative Potential

Carbon dioxide occurs naturally in the atmosphere.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of container in accordance with all applicable local and national regulations. Do not cut puncture or weld on or near to the container. If spilled, contents will vaporize to the atmosphere.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data Carbon Dioxide, 2.2, UN1013

UN Proper Shipping Name Carbon Dioxide

UN Class (2.2) Non-Flammable Gas

UN Number UN1013

UN Packaging Group Not applicable

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

United States TSCA Inventory



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All components of this product are in compliance with the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Canada DSL Inventory

All ingredients in this product have been verified for inclusion on the Domestic Substance List (DSL).

SARA Title III Sect. 311/312 Categorization

Pressure Hazard

SARA Title III Sect. 313

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3.

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Full text of H-Statements referred to under sections 2 and 3.

H280: Non Flammable Gas

Issue Date: 2015-10-30

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

* * * END OF MSDS * * *