

Safety Data Sheet

Creation data : 09.11.2011
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1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier :

Product name : 16 g CO2 chargers
Chemical formula : CO2
CAS: 124-38-9 EC:204-696-9
Index Number: N/A

1.2 Details of the supplier of the safety data sheet :

Ying Paio Enterprise Co., Ltd
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1.3 Emergency telephone Number: +886 2 8124515

2: HAZARDS IDENTIFICATION

Oxygen levels below 19.5% may cause asphyxia. Carbon dioxide exposure can cause nausea and respiratory problems. High concentrations may cause vasodilation leading to circulatory collapse.
Warning! Pressurized container; protect from sunlight; do not expose to temperatures exceeding 50°C (122° F); keep out the reach of children; never dispose of full container, never force open.

3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Preparation : Substance

Chemical name : Carbon Dioxide	CAS number : 124-38-9	EC Number (from EINECS) 204-696-9	Symbol 	UN Number: UN1013
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4: FIRST AID MEASURES

4.1 Description of first aid measures

- 4.1.1 Inhalation :** Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.
- 4.1.2 Ingestion :** Not expected under normal conditions due to gaseous state.
- 4.1.3 Skin Contact :** Wash affected area with soap and water; if irritation persists, seek medical attention.

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4.1.4 Eye Contact : Check for and remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

5: FIRE-FIGHTING MEASURES

5.1 Specific Hazards :

Exposure to fire may cause containers to rupture/explode.

5.2 General Hazards :

Product is not flammable or combustible. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

5.3 Extinguishing Media:

Carbon dioxide, water, water fog, dry chemical, chemical foam.

5.4 Unusual Fire and Explosion Hazards:

Closed containers can explode due to buildup of pressure when exposed to extreme heat. Contents under pressure. Do not use or store near heat sources.

5.5 Hazardous Combustion Products:

Smoke, fumes or vapors, oxides of carbon.

6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions :

Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation.

6.2 Environmental precautions:

Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.3 Clean up methods :

Ventilated area.

7: HANDLING AND STORAGE

Handling : Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures, keep away from sources of heat. Do not puncture container. Do not attempt to refill container. Keep away from direct sunlight and heat.

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Storage : Do not heat. Maximum environmental temperature in use not to exceed 50°C (122° F). Store in a cool and dry location.

Packaging materials : Recyclable steel.

Recommended use : Use original container.

8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering controls : The use of local exhaust ventilation is required to control emissions near the source. Provide mechanical ventilation of confined spaces.

Personal protection : Ensure adequate ventilation. Carry working gloves and protection.

9: PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties of CO2 (E290--99% CO2)

Gas density at 1 atm : 1.836 kg/m³ at 20°C
 Relative density (air=1) : 1.53 at 20°C
 Melting point (CO2 Sublimes) : - 78° C (- 109° F)
 Boiling point : - 57° C (- 70° F)
 Solubility (H2O) : 1.45 g/L at 25 °C, 100 kPa
 Odor and appearance : A colorless, odorless gas

Parameter of 12g CO2 charger	<u>22222222</u> METRIC UNITS	<u>US / IMPERIAL UNITS</u>
Overall Length (approx) :	88.4 mm	3.48 in
Body Diameter :	22 mm	0.866 in
Neck Diameter :	8.6 mm	0.339 in
Internal Volume (approx) :	20.4 ml	1.24 in ³
Net weight of CO2 (approx) :	16 g	0.64 oz
Tare wt. of charger (approx) :	42 g	1.68 oz
Gross wt. of charger (approx) :	58 g	2.32 oz
Bursting pressure :	>500 bar	>7250 lbf/in ²
Pressure / Temperature Characteristics at filling density of 0.78 kg/liter :	52 bar at 20 °C	750 lbf/in ² at 68 °F
	185 bar at 50 °C	2680 lbf/in ² at 122 °F
	290 bar at 70 °C	4200 lbf/in ² at 158 °F
	425 bar at 100 °C	6160 lbf/in ² at 212 °F
	470 bar at 110 °C	6815 lbf/in ² at 230 °F

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10: STABILITY AND RELIABILITY

Stability:	The product is stable.
Materials to avoid :	Strong oxidizers, strong acids.
Hazardous Decomposition Products :	Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.

11: TOXICOLOGICAL INFORMATION

General
No known toxicological effects from this product.

Acute toxicity
Concentrations above 8% CO₂ can cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness.

12: ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

13: DISPOSAL CONSIDERATIONS

Waste Disposal Method .
Never dump at sea. Inform waste disposal contractor of material to be disposed of zinc-plated and chrome stabilised steel. Never dispose of a filled cylinder.

14: TRANSPORT INFORMATION

Non hazardous
Class II
UN No. UN 2037
Title : Receptacles, small, containing gas (gas cartridges)
Receptacles with capacity not exceeding 1000 ml containing only non-toxic constituents, non-flammable, without release device, not refillable.

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15: REGULATORY INFORMATION

EU Regulations : Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

Hazard symbol(s) :



Classification : Harmful

Risk Phrases : R20- Harmful by inhalation.

Safety Phrases : S38 - In case of insufficient ventilation, wear suitable respiratory equipment.

Contains : CO₂

16: OTHER INFORMATION

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on Information from similar products, the ingredients, technical literature, and/or professional experience.