

Tulmar Safety Systems Inc

Safety Data Sheet

SECTION 1. IDENTIFICATION

Product Identifier	Model 1XL – P/N 6152, 6152-014, 61010-002; Model 6XL – P/N 6141-(), 6291-(), 61002-(), 61003, 61004-(), 61011-(), 61025-(); Model 10XL – P/N 6143-(); Model 20XL – P/N 6269;
Other Means of Identification	Life Raft, Life Saving appliance, Self-Inflating, UN2990 Class 9
Recommended Use	Inflatable life raft for emergency use on general, corporate and commercial aircrafts
Restrictions on Use	Inflated with compressed gas, do not use or store around sharp objects risk of puncture.
Initial Supplier Identifier	Tulmar Safety Systems Inc
Emergency Telephone Number	CANUTEC 613-996-6666

SECTION 2. HAZARD IDENTIFICATION

Classification	Carbon dioxide CO ₂ , compressed gas, CAS# 124-38-9, UN1013, Class 2.2 Lithium Battery, AA lithium battery packed with the Equipment, UN3481, Class 9.
Unusual Hazards	The packed raft contains pressurized gas cylinder which may discharge or rupture under extreme temperatures or fire. Carbon dioxide displace air and is asphyxiant in high concentrations. The raft could self-inflate without warning under fire or excessive heat conditions. Use care in confined spaces as inflated appliance will be several times larger than original package. The raft material is made of neoprene rubber, with urethane canopy. Materials may create harmful fumes under certain fire conditions.
Other Hazards Label Elements	See section 5



SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Carbon dioxide	124-38-9	Compressed	CO ₂ ,	UN1013
Lithium battery	N/A	N/A	Cells	UN3481

SECTION 4. FIRST-AID MEASURES

If in contact with CO₂ gas.

Inhalation	Provide fresh air and seek medical attention.
Eye contact	If eye tissue is frozen, seek medical attention immediately; if tissue is not frozen, immediately and thoroughly flush the eyes with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation, pain, swelling or impact on vision persist, get medical attention as soon as possible.
Skin Contact	Can cause frostbite / numbness if in contact to liquified CO ₂ . DO NOT rub the affected area(s) or flush them with water: Quickly remove source of contamination; Carefully cut around clothing that sticks to the skin and remove the rest of the garment. Loosely cover the affected area with a sterile dressing. Immediately seek medical attention.
Ingestion	DO NOT induce vomiting, seek medical attention immediately.

Under normal conditions of use, batteries are hermetically sealed. The below first aid measures applies for open or leaking batteries;

Inhalation	Provide fresh air and seek medical attention.
Eye contact	Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.
Skin Contact	Remove contaminated clothing and wash skin with soap and water.
Ingestion	DO NOT induce vomiting, seek medical attention immediately.

SECTION 5. FIRE-FIGHTING MEASURES

Auto Ignition

Extinguishing Media

Suitable Extinguishing Media

Large volumes of water, carbon dioxide/ chemical extinguishers / powder, sand. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Fires involving lithium batteries can be controlled by flooding with water. However, the contents of the battery will react with water and form hydrogen gas. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended. A smothering agent will extinguish burning lithium batteries.

Unsuitable Extinguishing Media	N/A
Specific Hazards Arising from the Product	The raft contains a CO ₂ compressed gas cylinder which could activate or rupture under extreme temperatures. Keep away from open flames and extreme heat sources. / If rapidly heated the signal flares could explode.
Special Protective Equipment and	Ventilate area first and wear protective breathing equipment and protective clothing.
Precautions for Fire-Fighters	Emergency Responders should wear self-contained breathing apparatus. Burning lithium-iron disulfide batteries produce toxic and corrosive lithium hydroxide fumes and sulfur dioxide gas.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	<p>Hazardous materials are contained in sealed units within packed life raft. Spills should pose no threat if the sealed units are not breached.</p> <p>Compressed gas, protect against frostbite and ventilate the area.</p> <p>To avoid high concentration of CO₂ in case of accidental release, ventilate room or areas.</p> <p>Avoid exposure to electrolyte fumes from open or leaking batteries.</p> <p>Wear safety glasses with side shields if handling an open or leaking battery.</p> <p>Ignition sources must be voided. Handle material with care.</p>
Methods for Containment and Cleaning Up	Released CO ₂ will ventilate to the outside atmosphere and leave no waste behind other than the vest, which can be rearmed for future use. May contain batteries, dispose of as per local regulations.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling	Do not heat or rupture the CO ₂ cylinder. Do not drop or crush packaged rafts. If removed from packaging DO NOT PULL THE INFLATION CORD, this will activate the inflation system. Only lift the packed raft by its handles if packed in a fabric valise. If raft is packed in a hard container, lift from bottom. Opening the raft valise or hard container may cause the raft to inflate. Life raft can cause injury if inflated close to people or in a confined area. The life raft's compressed gas cylinder is equipped with a pressure relief device. The device will vent gas from the cylinder if stored at temperatures above 54°C. The raft may partially or fully inflate if the pressure relief device activates.
Conditions for Safe Storage	Store in cool dry area away from excessive heat, open flame, and moisture.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Carbon Dioxide	5,000 ppm	30,000 ppm	5,000 ppm	30,000 ppm

Exposure Controls for batteries:

Ventilation Requirements: Not necessary under normal conditions.

Respiratory Protection: Not necessary under normal conditions.

Eye Protection: Not necessary under normal conditions.

Gloves: Not necessary under normal conditions.

Notes

Appropriate Engineering Controls Mechanical ventilation discharged to the outside, personal enclosure, remote or automated operation, supply replacement air

Individual Protection Measures

Eye/Face Protection Safety glasses

Skin Protection Chemical resistant gloves

Respiratory Protection Air supplied breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed OEL.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	N/A
Odour	N/A
Odour Threshold	N/A
pH	N/A
Melting Point and Freezing Point	N/A
Initial Boiling Point and Boiling Range	N/A
Flash Point	N/A
Evaporation Rate	N/A
Flammability (solid, gas)	N/A
Upper and Lower Flammability or Explosive Limit	N/A
Vapour Pressure	N/A
Vapour Density (air = 1)	N/A
Relative Density (water = 1)	N/A
Solubility in Water	N/A
Solubility in Other Liquids	N/A
Partition Coefficient, n-Octanol / Water (Log Kow)	N/A
Auto-ignition Temperature	N/A
Decomposition Temperature	N/A
Viscosity	N/A

SECTION 10. STABILITY AND REACTIVITY

Reactivity	N/A
Chemical Stability	Stable under normal conditions
Possibility of Hazardous Reactions	May form harmful fumes under fire conditions.
Conditions to Avoid	Keep away from heat and sharp objects.
Incompatible Materials	N/A
Hazardous Decomposition Products	The CO ₂ will discharge to the atmosphere, and the life raft will remain intact.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation Skin contact Eye contact Ingestion

Acute Toxicity

LC50	Not classified
LD50 (oral)	Not classified
LD50 (dermal)	Not classified

Notes

Skin Corrosion / Irritation	Not a skin irritant
Serious Eye Damage /Irritation	May cause mild eye irritation.
STOT (Specific TargetOrgan Toxicity) - Single Exposure	N/A
Aspiration Hazard	N/A
STOT (Specific TargetOrgan Toxicity) - Repeated Exposure	N/A
Respiratory and/or Skin Sensitization	N/A
Carcinogenicity	No carcinogenic components identified.

Chemical Name	IARC	ACGIH®	OSHA
N/A	N/A	N/A	N/A

Notes

Reproductive Toxicity

Development of Offspring	No reported effects
Sexual Function andFertility	No reported effects
Effects on or viaLactation	No reported effects
Germ Cell Mutagenicity	N/A
Interactive Effects	N/A

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SECTION 12. ECOLOGICAL INFORMATION)

Ecotoxicity	CO ₂ can be harmful to aquatic life
Persistence and Degradability	N/A
Bio accumulative Potential	N/A
Mobility in Soil	N/A
Other Adverse Effects	N/A

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods Any compressed gas released will dissipate into the atmosphere and leave no hazardous waste. Other solid portions of the life raft may be disposed of as domestic waste in accordance with local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper shipping name	Technical Name(for N.O.S. entry)	Transport Hazard Class(es)	Packing Instruction IATA
	2990	Life Raft	Life Saving Appliance, self-inflating	9	955

Special Precautions	N/A
Environmental Hazards	N/A
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code	N/A

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations To the best of our knowledge, there are no chemicals at levels that require reporting for this product.

SECTION 16. OTHER INFORMATION

Date of Latest Revision March 21, 2022
