

empackEmpack Spraytech Inc.
98 Walker Drive
Brampton, Ontario, L6T 4H6
Canada
905-792-6571

PRODUCT: Emzone A/C Cool Refrigerant - 170g

CODE: 045851

Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identity..... Emzone A/C Cool Refrigerant - 170g
 Product Item Numbers..... 045851
 Manufactured by..... Empack Spraytech Inc.
 98 Walker Drive
 Brampton
 Ontario
 Canada
 L6T 4H6
 905-792-6571
 24 hour emergency telephone number..... CANUTEC: (613)-996-6666 collect.
 Recommended Use..... Environmental friendly Refrigerant.
 Consumer Commodity..... Yes.
 Hazard Ratings:
 HMIS..... Health: 1 Fire: 4 Reactivity: 0.
 NFPA Rating..... Health: 1 Fire: 4 Reactivity: 0.

Section 02: HAZARDS IDENTIFICATION

Emergency Overview..... Extremely flammable . Container is under pressure. Container may explode if heated. Do not puncture. Do not burn. May cause skin and eye irritation. KEEP OUT OF REACH OF CHILDREN .

Potential Health Effects:
 Skin Contact May cause skin irritation.
 Eye Contact..... May cause irritation, redness and pain.
 Ingestion..... Ingestion is not a likely route of exposure.
 Inhalation..... Prolong inhalation of product may cause irritation.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS #	Wt. %
Propane	74-98-6	30- 60
Isobutane	75-28-5	30- 60

Section 04: FIRST AID MEASURES

Eye Contact..... Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
 Skin Contact..... Wash exposed area with soap and water.
 Ingestion..... Do not induce vomiting, get medical attention.
 Inhalation..... If inhaled, remove to fresh air. If not breathing, give artificial respiration and obtain immediate medical assistance. If breathing is difficult, give oxygen and get medical attention.
 Additional Information..... Note to the doctor; treat symptomatically.

Section 05: FIRE FIGHTING MEASURES

Flammability Class..... Extremely Flammable.
 Extinguishing Media..... Carbon dioxide, dry chemicals, foam or water fog.
 Sensitivity to Mechanical Impact..... Not expected to be sensitive.
 Sensitivity to Static Discharge..... Not expected to be sensitive.

Section 06: ACCIDENTAL RELEASE MEASURES

Spills and Leaks..... Remove all sources of ignition. Wash area with significant quantity of water.

Section 07: HANDLING AND STORAGE

Handling..... Use with adequate ventilation. Do not store in temperatures above 120°F (50°C). Keep away from heat, sparks, and open flames.

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Section 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye/Type..... Safety glasses with side-shields.
 Skin/Type..... Use gloves and protective clothing against cold temperature made from viton, butyl rubber, PVC, neoprene or nitrile.
 Respiratory/Type..... Not required on a short-term basis or if exhaust ventilation is provided.
 Engineering Controls..... Local exhaust ventilation required to maintain the point of use below the Threshold Limit Value if unprotected personnel are involved.

Exposure Limits

Ingredients	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL NIOSH
Propane	2,500 ppm	Not available	1,000 ppm	Not available	1,000 ppm
Isobutane	800 ppm	1000 ppm	800 ppm	Not available	800 ppm (TWA)

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

Physical State
 Physical Appearance..... Colorless.
 Odour..... Amine Odour.
 Odour Threshold (ppm)..... Not available.
 pH..... Not applicable.
 Vapour Pressure (psig)..... 80- 95 .
 Vapour Density (Air=1)..... 1.64.
 Evaporation Rate (n-Butyl Acetate = 1)..... Not available.
 Initial Boiling Point/Boiling Range (°C)..... -37.8.
 VOC Content..... > 95 wt%.
 Specific Gravity (Liquid)..... 0.840- 0.880.
 Specific Gravity (Aerosol)..... 0.890- 0.910 .
 Solubility in water..... Not soluble in water.
 Aerosol Flame Projection..... Not available .
 Auto Ignition Temperature (Propellant), °C... 460 °C/860 °F.
 Flashback..... No data .
 Flash Point (°C), Method..... -83.15°C/ -117.7°F.
 Lower Flammable Limit (% Vol)..... 1.8.
 Upper Flammable Limit (% Vol)..... 9.5.

Section 10: STABILITY AND REACTIVITY

Stability..... Stable at normal temperatures and pressures.
 Incompatibility..... Strong oxidizing agents. Strong acids.
 Conditions to Avoid..... Avoid sources of heat and flame, and electrostatic charge.
 Hazardous Products of Decomposition..... Thermal decomposition and burning may produce carbon monoxide and carbon dioxide.
 Hazardous Polymerization..... Has not been reported.

Section 11: TOXICOLOGICAL INFORMATION

Route of Exposure..... Skin contact, Eye contact, Inhalation and Ingestion.
 Effects of Acute Exposure..... Harmful if swallowed or inhaled. Repeated or prolonged contact may cause slight irritation to the skin. May cause irritation to the eyes.
 Effects of Chronic Exposure..... May cause skin defatting and dermatitis.
 Carcinogenicity of Material..... Not classified as carcinogenic by ACGIH, IARC, OSHA or NTP.
 Reproductive Effects..... No information is available, and no adverse effects are expected.
 Teratogenicity..... No information is available, and no adverse effects are expected.
 Mutagenicity..... No information is available, and no adverse effects are expected.

Toxicological Data

Ingredients	LC50	LD50
Propane	>800,000 ppm (15 min,Inh,rat)	Not available
Isobutane	658 mg/L (4hrs,rat)	Not available

Section 12: ECOLOGICAL INFORMATION

Environmental..... Complete information is not yet available.

Section 13: DISPOSAL CONSIDERATIONS

Appropriate Disposal Methods..... Dispose in accordance with local, provincial and federal regulations.

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Section 14: TRANSPORT INFORMATION

TDG (Canada- Road)..... AEROSOLS, Class 2.1, UN1950.
 DOT (US-Road)..... AEROSOLS, Class 2.1, UN1950, LTD. QTY. OR ORM-D.
 IMDG (International- Marine)..... AEROSOLS, Class 2.1, UN1950.
 IATA (International- Air)..... AEROSOLS, Class 2.1, UN1950, LTD QTY.

Section 15: REGULATORY INFORMATION

Canada..... WHMIS Classification. A: Compressed gas. B5: Flammable Aerosol.
 USA..... Environmental Protection Act: Constituents of this product are included on the TSCA inventory. OSHA (29CFR 1910.1200) Classification: Compressed Gas. HIMS Classifications: see section 01.

Section 16: OTHER INFORMATION

Disclaimer..... The information contained herein is based on data considered accurate. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Empack assumes no responsibility for personal injury or property damage to vendees or users or third parties, caused by the material. Such vendees or users assume all risks with the use of the material. This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR. THIS SDS IS VALID FOR THREE YEARS.

Abbreviations..... ACGIH: American Conference of Governmental Industrial Hygienists; CAS: Chemical Abstract Service; NIOSH: National Institute for Occupational Safety and Health, OSHA: Occupational Safety and Health Administration- USA; TSCA: Toxic Substances Control Act 1976-USA; PEL: Permissible Exposure Limit; REL: Recommended Exposure Limit; TLV: Threshold Limit Value; VOC: Volatile Organic Content; WHIMIS: Workplace Hazardous Materials Information System.

Prepared by Regulatory Affairs
 Preparation Date..... Oct24/13
 Last Revision Date Oct30/14

empackEmpack Spraytech Inc.
98 Walker Drive
Brampton, Ontario, L6T 4H6
Canada
905-792-6571

PRODUCT: Emzone 12A A/C Stop Leak- 114g

CODE: 045856

Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identity..... Emzone 12A A/C Stop Leak- 114g
 Product Item Numbers..... 045856
 Manufactured by..... Empack Spraytech Inc.
 98 Walker Drive
 Brampton
 Ontario
 Canada
 L6T 4H6
 905-792-6571
 24 hour emergency telephone number..... CANUTEC: (613)-996-6666 collect.
 Recommended Use..... A/C leak seal for metal and rubber parts.
 Consumer Commodity..... Yes.
 Hazard Ratings:
 HMIS..... Health: 1 Fire: 4 Reactivity: 1.
 NFPA Rating..... Health: 1 Fire: 4 Reactivity: 1.

Section 02: HAZARDS IDENTIFICATION

Emergency Overview..... Extremely flammable . Extreme danger. Contact with liquid can cause frostbite . Container is under pressure. Container may explode if heated. Do not puncture. Do not bum. Do not get in eyes or clothing. KEEP OUT OF REACH OF CHILDREN .

Potential Health Effects:
 Skin Contact..... Contact with liquid may cause burns and frostbite. Skin may be flushed; as frostbite develops. Blisters may develop.
 Eye Contact..... Direct contact with liquid or frost particles may produce severe and possibly permanent eye damage.
 Ingestion..... Ingestion is not a likely route of exposure.
 Inhalation..... Dense vapour of this material may reduce the available oxygen for breathing. Prolong inhalation of content may cause irritation.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS #	Wt. %
Isobutane	75-28-5	30- 60
Propane	74-98-6	30- 60
Silanes Mixture	Trade Secret	10-30
Methanol	67-56-1	0.1-1.0

Section 04: FIRST AID MEASURES

Eye Contact..... If eye tissue is frozen, seek medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation, pain, swelling, lacrimation, or photophobia persist, get medical attention as soon as possible .

Skin Contact..... If frostbite has occurred, seek medical attention immediately; do NOT rub the affected areas or flush them with water. In order to prevent further tissue damage, do NOT attempt to remove frozen clothing from frostbitten areas. If frostbite has NOT occurred, immediately and thoroughly wash contaminated skin with soap and water.

Ingestion..... If swallowed, get medical attention immediately. Do not induce vomiting .

Inhalation..... Move victim to fresh air. If breathing has stopped, give artificial respiration. If heartbeat absent, give external cardiac compression. Monitor breathing and pulse. Get medical attention.

Additional Information..... Note to the doctor; treat symptomatically.

Section 05: FIRE FIGHTING MEASURES

Flammability Class..... Extremely Flammable.
 Extinguishing Media..... Carbon dioxide, dry chemicals, foam or water fog.
 Sensitivity to Mechanical Impact..... Not expected to be sensitive.
 Sensitivity to Static Discharge..... Not expected to be sensitive.

PRODUCT: Emzone 12A A/C Stop Leak- 114g

CODE: 045856

Section 06: ACCIDENTAL RELEASE MEASURES

Spills and Leaks..... Remove all sources of ignition. Evacuate and Ventilate the area. Attempt to disperse the gas or direct its flow to a safe location for example by using fog sprays.

Section 07: HANDLING AND STORAGE

Handling..... Avoid breathing vapours or spray mists of this product. Avoid contact with eyes, skin, and clothing. Keep away from heat, sparks, and open flames. Use in well ventilated area. Do not store near cylinders, containing compressed Oxygen or other strong oxidizers. Wash thoroughly after handling . Remove ignition sources.

Section 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye/Type..... Safety glasses with side-shields.
 Skin/Type..... Use gloves and protective clothing against cold temperature made from viton, butyl rubber, PVC, neoprene or nitrile.
 Respiratory/Type..... Not required on a short-term basis or if exhaust ventilation is provided. Use approved NIOSH respirators for emergencies.
 Engineering Controls..... Local exhaust ventilation required to maintain the point of use below the Threshold Limit Value if unprotected personnel are involved.

Exposure Limits

Ingredients	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL NIOSH
Isobutane					
Propane	2,500 ppm	Not available	1,000 ppm	Not available	1,000 ppm
Silanes Mixture	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
Methanol	200 ppm	250 ppm	200 ppm (260 mg/m3)	250 ppm (325 mg/m3)	200 ppm (260 mg/m3)

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

Physical State..... Liquid.
 Physical Appearance..... Colourless to pale yellow.
 Odour..... Strong alcohol odour.
 Odour Threshold (ppm)..... Not available.
 pH..... Not applicable.
 Vapour Pressure (psig)..... 70.
 Vapour Density (Air=1)..... Not available.
 Evaporation Rate (n-Butyl Acetate = 1)..... Not available.
 Boiling Point (° C)..... 125 °C.
 VOC Content..... > 75%.
 Specific Gravity (Liquid)..... 0.570-0.600.
 Specific Gravity (Aerosol)..... 0.960-0.968.
 Solubility in water..... Not soluble in water.
 Aerosol Flame Projection..... Not available .
 Auto Ignition Temperature (Propellant), ° C.. 460 °C/860 °F.
 Flashback..... No data .
 Flash Point (° C), Method..... Closed cup: -83.15 °C (-117.7 °F).
 Lower Flammable Limit (% Vol)..... 1.8.
 Upper Flammable Limit (% Vol)..... 9.5.

Section 10: STABILITY AND REACTIVITY

Stability..... Stable at normal temperatures and pressures.
 Incompatibility..... Strong oxidizing agents. Strong acids.
 Conditions to Avoid..... Avoid sources of heat and flame, and electrostatic charge.
 Hazardous Products of Decomposition..... Thermal decomposition and burning may produce carbon monoxide and carbon dioxide.
 Hazardous Polymerization..... Has not been reported.

Section 11: TOXICOLOGICAL INFORMATION

Route of Exposure..... Skin contact, Eye contact, Inhalation.
 Effects of Acute Exposure..... Rapid released of gases which are liquids under pressure may cause frost burns of exposed tissues (skin,eye) due to evaporative cooling. High gas concentrations will displace available oxygen from the air; unconsciousness and death may occur suddenly from lack of oxygen. Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest.
 Effects of Chronic Exposure..... May cause damage to the central nervous system .
 Carcinogenicity of Material..... Not classified as carcinogenic by ACGIH, IARC, OSHA or NTP.
 Reproductive Effects..... No information is available, and no adverse effects are expected.

PRODUCT: Emzone 12A A/C Stop Leak- 114g

CODE: 045856

Section 11: TOXICOLOGICAL INFORMATION

Teratogenicity..... No information is available, and no adverse effects are expected.
 Mutagenicity..... No information is available, and no adverse effects are expected.
 Toxicological Data

Ingredients	LC50	LD50
Isobutane	NOT INDICATED	NOT INDICATED
Propane	>800,000 ppm (15 min,Inh.rat)	Not available
Silanes Mixture	NOT AVAILABLE	NOT AVAILABLE
Methanol	64,000 ppm 4 hr. rat	5628 mg/kg (rat - oral); 15,840 mg/kg (rabbit - dermal)

Section 12: ECOLOGICAL INFORMATION

Environmental..... Complete information is not yet available.

Section 13: DISPOSAL CONSIDERATIONS

Appropriate Disposal Methods..... Dispose in accordance with local, provincial and federal regulations.

Section 14: TRANSPORT INFORMATION

TDG (Canada- Road)..... AEROSOLS, Class 2.1, UN1950.
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 Preparation Date..... Oct24/13
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