

DURACOOOL 22a (R 290) Refrigerant Cylinder SAFETY DATA SHEET

Deepfreeze Refrigerants Inc.
2695 Slough Street
Mississauga Ontario L4T 1G2
Canada 905 671 4222

PRODUCT: Duracool 22a (R 290) Refrigerant 5.44 kg.

Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identity..... Duracool 22a (R 290) Refrigerant 5.44 kg.
Product Item Numbers..... N/A

Manufactured by..... Deepfreeze Refrigerants Inc..
2695 Slough Street
Mississauga Ontario L4T 1G2

24 hour emergency telephone number
CHEMTREC 1-800-262-8200 (within North America) +1 703-741-5500 (Worldwide)

Recommended Use..... Ecologically friendly Refrigerant.
Consumer Commodity..... No.
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	95- 100

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.

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	ACGIH TLV		OSHA PEL		NIOSH
Ingredients	TWA	STEL	PEL	STEL	REL
Propane	2,500 ppm	Not available	1,000 ppm	Not available	1,000 ppm

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

Physical State..... Liquid.
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.
Solubility in water..... Not soluble in water.
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

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)..... Class 2.1, UN1075.
DOT (US-Road)..... Class 2.1, UN1075,
IMDG (International- Marine)..... Class 2.1, UN1075.

Section 15: REGULATORY INFORMATION

Canada..... WHMIS Classification. A: Compressed gas. B5: Flammable.
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. Deepfreeze 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
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