

Material Safety Data Sheet

Date of Preparation: 1/21/05

MSDS No. AF-4

Section 1 – Chemical Product and Company Identification

Product Name: Arctic Freeze
Part Number(s): AF-4
CAS Number: NOT APPLICABLE TO MIXTURES
Product Class: Automotive product

Manufacturer: Interdynamics, Inc. 555 White Plains Rd, 5th Floor, Tarrytown, NY 10591
Information Phone No. (Interdynamics): 914-798-7900 **Emergency Phone No.(CHEMTREC):** 800-424-9300

Section 2 – Composition/ Information on Ingredients

Ingredient Name	CAS Number	OSHA TWA	ACGIH TLV
1,1,1,2- Tetrafluoroethane	811-97-2	-	-
Polyol Ester	N/A	Not Listed	Not Listed
Emkarate 842	Proprietary	-	-
Emkarate 1700	Proprietary	-	-
Antioxidant	-	-	-
QwikBoost	Proprietary	-	-
Emkarate DE-10079	Proprietary	-	-
Tricresyl phosphate (TCP containing <0.1% ortho isomer)	1330-78-5	Not Listed	Not Listed
Ingredients not precisely identified are proprietary or non-hazardous.			

Section 3 – Physical and Chemical Properties

Physical State: Gas and liquid under pressure. **Boiling Range:** -26.2 deg. F. @ 760 mm Hg.
Appearance/Odor: Ethereal and Ester Odor. **Vapor Density (Air=1):** 3.5
% Volatile: N/A **Specific Gravity (@C20 °C):** N/A
Evaporation Rate(Butyl Acetate=1): >1 **Vapor Pressure:** Gas: 85.8 mm Hg. @ 70 deg. F. Liquid: <1

Section 4 – Fire Fighting Measures

Flash Point: Not Determined
Flash Point Method: N/A
LEL: N/A
Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog, Sand/Earth.
Unusual Fire or Explosion Hazards: This material may become flammable when mixed with air under pressure and exposed to strong ignition sources. Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g., very high temperatures and/or appropriate pressures).
Special Fire-Fighting Procedures: Firefighters must wear self-contained breathing apparatus with full face-piece operated in pressure demand or positive pressure mode. Use full turnout gear.

Section 5 – Stability and Reactivity

Stability: Stable
Polymerization: Will not occur.
Incompatibilities & Conditions to Avoid: Do not mix with oxygen or air above atmospheric pressure. Any source of high temperature such as lighted cigarettes, flames, hot spots, welding may yield toxic and/or corrosive decomposition products. **Materials to Avoid:** At very high temperatures and/or appropriate pressures, freshly abraded aluminum surfaces may cause strong exothermic reaction; Also avoid, chemically active metals, potassium, calcium, powdered aluminum,

magnesium, and zinc. Avoid strong oxidizing agents.

Hazardous Decomposition Products: At high temperatures CO & CO₂; HF & Carbonyl Halides such as Phosgene.

Section 6 – Health Hazard Information

Primary Entry Routes: Eyes, dermal, inhalation and ingestion

Target Organs: Eyes, skin, respiratory system

Signs & Symptoms of Exposure: Irritation to skin and eyes. Dizziness, loss of coordination or lung irritation. Ingestion may cause gastrointestinal discomfort and diarrhea.

Acute Effects: Skin and eye irritation. May cause dizziness and loss of concentration. At high levels, Cardiac Arrhythmia may occur. Possible frostbite.

Chronic Effects: No data available.

Carcinogenicity: This product does not contain components that are listed as a Carcinogen.

Medical Conditions Generally Aggravated by Exposure: May adversely affect use of Catecholamine drugs such as Epinephrine. Prolonged exposure may cause Kidney and Liver damage.

Emergency and First Aid Procedures

Inhalation: Exposure to very high concentration can induce anesthetic effect. Excessive inhalation exposure may cause irritation of respiratory passages. Can act as an asphyxiant by limiting oxygen. Cardiac sensitization to circulating epinephrine-like compounds can result in fatal cardiac arrhythmias. Remove to fresh air. Give artificial respiration if not breathing. Give oxygen if breathing labored. If cardiac arrest, apply external cardiac massage. Do not administer adrenaline or similar drugs as cardiac arrhythmias may result. Call physician immediately.

Eye Contact: Liquid splashes or vapor spray may cause freeze burns. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for 15 minutes. Have eyes examined and treated by medical personnel.

Skin Contact: Liquid form of this material may cause freeze burns (frostbite-like lesions). Thaw affected areas with water, remove contaminated clothing carefully. Wash affected areas of skin thoroughly with plenty of warm water. Obtain medical attention. Prolonged contact with skin may cause red skin irritation or dermatitis. Remove oil from skin by washing well with soap and water. Launder clothing before reuse.

Ingestion: May be harmful if swallowed. Do not induce vomiting without a Physician's advice.

Section 7 – Spill, Leak, and Disposal Procedures

Keep at temperature not exceeding 113 DEG F. Keep containers dry. Keep away from direct sunlight, or any heat source.

See SEC 09 Special Precautions for industrial hygiene control measures. Clean up any oil spill. Prevent entry into sewers and water ways. Absorb with inert absorbent. Place used rags and absorbent in closed metal containers. It is illegal to purposely vent into the atmosphere.

Steps To Be Taken In Case Material Is Released or Spilled: Evacuate unprotected personnel. Wear protective equipment. Ventilate area. Contain and absorb with non-combustible absorbent. Transfer into suitable containers.

Waste Disposal Method: In accordance with applicable Federal, State and local regulations.

Precautions To Be Taken In Handling and Storage: Wear protective gloves and clothing with an outer layer of Mylar coated Durafab. Wear safety goggles. Use in well ventilated areas. Keep away from strong oxidizing agents.

Other Precautions: Do not puncture container except with an Interdynamics' approved device intended to be used with the particular container. Store in a shaded, cool, dry place. Do not expose to temperatures above 113 deg. F. Connect can to low pressure side of automobile A/C port only. Do not expose to high altitudes or low pressure ambient environment.

Section 8 – Exposure Controls / Personal Protection

Ventilation general mechanical ventilation. Oil mist inhalation should be avoided.

Protective Clothing/Equipment: NIOSH or MSHA respiratory protection must be worn if exposure to high concentrations is possible. Chemical tight goggles, full face-shield in addition if splashing is possible. Oil impervious Protective Gloves with outer layer of Mylar coated Durafab or PVA or Neoprene. Apron, arm covers or full body suit, depending on conditions. Impervious boots in case of prolonged liquid contact.

Safety Stations: Ventilate low-lying areas such as sumps or pits where dense vapors may collect. Use local exhaust to control exposures.

Work/Hygienic Practices: Use in well ventilated areas. Avoid inhaling vapors. Avoid contact with eyes, skin or clothing.

DOT Transportation Data

<u>PART NUMBER(S)</u> <u>GROUP</u>	<u>SHIPPING NAME</u>	<u>HAZARD CLASS</u>	<u>ID NO.</u>	<u>PACKING</u>
AF-4 N/A	Refrigerant Gas, R-134a , LTD. QTY.	ORM-D	UN 3159	

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