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MATERIAL SAFETY DATA SHEET

GEBAUER'S SPRAY AND STRETCH®

I. PRODUCT IDENTIFICATION

TRADE NAME SYNONYM	GEBAUER'S SPRAY AND STRETCH	Current Issue Date: July 28, 2008
CHEMICAL NAME SYNONYMS	1,1,1,3,3-PENTAFLUOROPROPANE 1,1,1,2-TETRAFLUOROETHANE	Chemical Family. Halogenated Hydrocarbon
FORMULA	$CHF_2CH_2CF_3$ \ F_3CCH_2F,	

II. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS NO.	Concentration	OSHA PEL	ACGIH TLV-TWA
1,1,1,3,3-PENTAFLUOROPROPANE	460-73-1	95%	None	None
1,1,1,2-TETRAFLUOROETHANE	811-97-1	5%	None	None

III. HAZARDS IDENTIFICATION

Health Rating	2
Flammability Rating	0
Reactivity Rating	1
Special Rating	None
Lab Protective Equipment	Neoprene, PVA, or Butyl Rubber gloves, labcoat, goggles or face shield, vent hood.

Inhalation	When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.
Ingestion	Unlikely route of exposure due to gaseous nature. Discomfort due to volatility would be expected.
Skin Contact	Over application could cause frostbite. Liquid contact is non-irritating.
Eye Contact	Liquid contact can cause irritation and frostbite.
Delayed Effects	None Known

IV. FIRST AID MEASURES

Inhalation	Immediately remove patient to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. **DO NOT** give epinephrine (adrenaline). Get medical attention immediately.
Ingestion	Unlikely route of exposure due to gaseous nature. **DO NOT** induce vomiting unless instructed to do so by a physician. **DO NOT** give stimulants. Get medical attention immediately.
Skin Contact	If there is evidence of frostbite seek medical attention.
Eye Contact	Immediately flush eyes with copious amounts of water for at least 15 minutes (in case of frostbite water should be lukewarm, not hot) lifting lids occasionally to facilitate irrigation. Get medical attention.

V. FIRE FIGHTING MEASURES

Flash point - None	Autoignition temperature - Unknown	Flammable Limits In Air (%by volume) - Nonflammable

Special Fire Fighting Procedures:
Fire fighters should wear self-contained, NIOSH approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use spray to keep fire-exposed containers cool.

Unusual Fire and Explosion Hazards:
Not flammable at ambient temperatures and atmospheric pressure. However this material will become combustible 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).

VI. ACCIDENTAL RELEASE MEASURES

Spill and Leak Response:
Evacuate unprotected personnel. Protected personnel should eliminate all sources of ignition and shut off leak, if without risk, and provide ventilation.
Waste Disposal Method:
Comply with federal, state and local laws.

VII. HANDLING AND STORAGE

Storage Precautions
Store in cool, dry, well ventilated area of low fire risk. Protect against physical damage. Do not subject to temperatures above 120ºF (50ºC).

Usage and Handling Precautions
Use in well-ventilated areas. Do not use near temperatures above 120ºF (50ºC).

VIII. EXPOSURE CONTROLS – PERSONAL PROTECTION

Engineering Controls	Provide local ventilation at filling zones and where leakage is probable. Use with adequate ventilation.
Respiratory Protection	None generally required for adequately ventilated work situations. For accidental release in confined space, where the concentration may be above the PEL of 1,000 ppm, use a NIOSH approved, self contained, positive pressure respirator for emergencies and in situations where air may be displaced by vapors.

Skin Protection	Use protective, impervious gloves and clothing made of neoprene, nitrile or butyl rubber if prolonged or repeated contact with liquid is anticipated. Wash clothing promptly, if wet. Remove any non-impervious clothing and wash before re-use.
Eye Protection	For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles. Contact lenses should not be worn under such conditions.
Exposure Limits	OSHA PEL: None ACGIH TLV: None TWA (8 hours): 300 ppm

IX. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	44.6ºF (7.0ºC)	Appearance & Odor	Colorless liquid, faint ethereal, sweetish odor
Vapor Pressure	At 72ºF (22ºC) = 10.8 psig	Specific Gravity (H_20)	1.33 at 72ºF
Vapor Density	Air = 1 at BP 4.7	% Volatile by Volume	100
Solubility in Water	<1%	Evaporation Rate	>1 (Carbon Tetrachloride = 1)

X. STABILITY AND REACTIVITY

Stability	Product is stable under normal conditions.
Hazardous Decomposition Products	Halogens and halogen acids; and possibly carbonyl halides.
Incompatible Materials	Strong acids and alkalis, reactive metals e.g., powdered or freshly abraded aluminum (may cause strong exothermic reaction), sodium, potassium, calcium, magnesium, zinc, molten aluminum, barium and lithium shavings. Strong oxidizing agents.
Hazardous Polymerization	Will not occur.
Conditions to Avoid	Avoid sources of ignition such as sparks, hot spots, welding flames and lighted cigarettes which may yield toxic and/or corrosive decomposition products. Do not mix with oxygen or air above atmospheric pressure.

XI. TOXICOLOGICAL INFORMATION

Dermal Irritation	Non-irritation and not a skin sensitizer.
Eye Irritation	Very slight irritation.
Inhalation	Evidence of transient anesthetic effect. HFC-134a: Lowest observed adverse effect level for cardiac sensitization was 75,000ppm.

XII. ECOLOGICAL INFORMATION

Environmental Stability	Gas is dissipated rapidly in a ventilated area**.**
Effect on Aquatic Life	CAS 40-73-1: Acute Toxicity to Rainbow Trout (Limit Test): NOEC >10 mg/L; 96 hr. EC_{50}>8108 mg/L CAS 811-97-1: Acute Toxicity to Rainbow Trout (Limit Test): 96 hr. LC50 is 450 mg/L

XIII. DISPOSAL CONSIDERATIONS

Waste disposal must be in accordance with appropriate Federal, State and local regulations.

XIV. TRANSPORT INFORMATION

Proper Shipping Name	**Gebauer's Spray and Stretch**
US DOT Hazard Class	**Not Regulated**
US DOT Identification Number	**Not Applicable**

XV. REGULATORY INFORMATION

USA TSCA	Not Listed
Europe EINECS	Not Listed
SARA Title III	RQ's and EHS TPQ: Not Listed. Sections 311, 312: Not Listed
WHMIS Classification (Canada)	MSDS meets requirements of CPR.
European Union	Not Listed as Hazardous Substance
Additional Regulatory Information	Contains greenhouse gases, which may contribute to global warming. Regulated in the US under Section 612 (SNAP) of the Clean Air Act and 40 CFR Part 82, subpart G.

XVI. OTHER INFORMATION

MSDS Revision on May 6, 2005. Format changes only.