

# MATERIAL SAFETY DATA SHEET

## SECTION 1: PRODUCT IDENTIFICATION AND USES

<b>Product Name</b>	ARTIC FREEZE (CH 700)	<b>CI#</b>	Not available.
<b>Synonyms</b>	Not available.	<b>DSL</b>	Not
<b>Chemical Name</b>	1,1,1,2-Tetrafluoroethane		
<b>Chemical Formula</b>	CF <sub>3</sub> CH <sub>2</sub> F		
<b>Chemical Family</b>	Hydrofluorocarbons.	<b>CAS#</b>	Not
<b>Supplier</b>	DEK Canada Inc. 1928 St. Regis Blvd., Dorval, Quebec H9P 1H6 Phone: (514) 685-5800		
<b>Material Uses</b>	Locates thermal intermittens.		

## SECTION 2: HAZARDOUS INGREDIENTS

Name	Cas#	% by Weight	LC <sub>50</sub> /LD <sub>50</sub>
1) 1,1,1,2-Tetrafluoroethane	811-97-2	100	GAS (CL50) ppm: Acute: 50000 (Rat) (4 hour(s))

## SECTION 3: PHYSICAL DATA

<b>Physical State and Appearance</b>	Gas (Liquefied).	<b>Odor</b>	Faint ethereal.
<b>PH (1% Soln/Water)</b>	Not available.	<b>Taste</b>	Not available.
<b>Odor Threshold</b>	Not available.	<b>Color</b>	Clear, colourless.
<b>Volatility</b>	Not available.		
<b>Evaporation Rate</b>	Not available.		
<b>Melting Point</b>	Not available.		
<b>Boiling Point</b>	Not available.		
<b>Density</b>	1.210 (Water = 1)		
<b>Vapor Density</b>	3.52 (Air = 1)		
<b>Vapor Pressure</b>	96.16 psia @ 25°C (77°F) based on data for: 1,1,1,2-Tetrafluoroethane		
<b>LogK<sub>ow</sub></b>	Not available.		
<b>Ionicity (Surface Active Agent)</b>	Not available.		
<b>Critical Temperature</b>	Not available.		
<b>Instability Temperature</b>	Not available.		
<b>Conditions of instability</b>	Not additional remark.		
<b>Dispersion Properties</b>	Not available.		
<b>Solubility</b>	Very slightly soluble in cold water.		

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## SECTION 4: FIRE AND EXPLOSION DATA

<b>The Product is:</b>	Non-flammable Aerosol.
<b>Auto-ignition Temperature</b>	Not applicable.
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ) and hydrogen fluoride.
<b>Flash Points</b>	Not applicable.
<b>Flammable Limits</b>	Not applicable.
<b>Extinguishing Media</b>	Cool containing vessels with water spray in order to prevent pressure build-up or explosion. Self-contained respiratory protection should be provided for firefighters.
<b>Flammability</b>	The flammability of an aerosol by WHMIS definition is determined by its flame-extension of this product is 0 cm. FIRE CODE: Level 1 aerosol(as per NFPA 30B).
<b>Risks of explosion</b>	Risks of explosion of the product in presence of mechanical impact: Do Not subject aerosol containers to impact. Risks of explosion of the product in presence of static discharge: Not available. Container may explode if heated.

## SECTION 5: REACTIVITY

<b>Stability</b>	The product is stable.
<b>Hazardous decomposition Products</b>	These products are carbon oxides (CO, CO <sub>2</sub> ) and hydrogen fluoride.
<b>Degradability</b>	Not available.
<b>Products of Degradation</b>	Not available.
<b>Corrosivity</b>	No specific information is available in our database regarding the corrosivity of this product in presence of various materials.
<b>Reactivity</b>	Avoid contact with strong oxidizing agents, strong alkalies and alkaline earth metals such as aluminium, magnesium or zinc. Keep away from open flame, extremely hot metal surfaces, heating elements and Combustion engines.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	No additional remark.

## SECTION 6: TOXICOLOGICAL PROPERTIES

<b>Routes of Entry</b>	Inhalation.
<b>TLV</b>	<b>1,1,1,2-Tetrafluoroethane</b> TWA: 1000 (ppm) TWA: 4240 (mg/m <sup>3</sup> ) Consult local authorities for acceptable exposure limits.
<b>Toxicity to Animals</b>	WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute toxicity of the gas (LC50):>5000 ppm (1,1,1,2-Tetrafluoroethane).
<b>Chronic Effects on Humans</b>	Not available.

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<b>Acute Effects on Humans</b>	<p><b>EYE CONTACT:</b> May cause frostbite.</p> <p><b>SKIN CONTACT:</b> May cause frostbite.</p> <p><b>INHALATION:</b> Vapour of this product is heavier than air and cause suffocation by reducing oxygen available for breathing. Breathing HIGH concentrations of vapour may cause light headedness, giddiness, shortness of breath.</p> <p><b>INGESTION:</b> May cause frostbite to the mouth.</p> <p>THIS PRODUCT CAN CAUSE SEVERE FROSTBITE IF IT ACCIDENTALLY COMES IN CONTACT WITH SKIN, EYES OR OTHER TISSUE.</p>
<b>Synergetic Products (Toxicologically)</b>	Not available.
<b>Irritation/Corrosivity</b>	See acute effects on humans
<b>Sensitization</b>	In rare cases, 1,1,1,2-Tetrafluoroethane may sensitize heart muscle causing cardiac arrhythmia
<b>Carcinogenic Effects</b>	The ingredients of this product have not been listed as carcinogens by the National Toxicology Program (NTP).
<b>Toxic Effects on Reproduction</b>	Not available.
<b>Teratogenic Effects</b>	Not available.
<b>Mutagenic Effects</b>	Not available.

## SECTION 7: PREVENTIVE MEASURES

<b>Small Spill and Leak</b>	Not applicable.
<b>Personal Protective Equipment</b>	Avoid contact with skin and eyes.
<b>Large Spill and Leak</b>	Not applicable for aerosol containers.
<b>Protective Clothing</b>	Not applicable for aerosol containers.
<b>Engineering Controls</b>	Use with adequate ventilation.
<b>Precautions</b>	Contents under pressure. Container may explode if heated. Direct skin contact with spray may cause frostbite. Keep out of reach of children.
<b>Storage</b>	Store in a cool, well-ventilated place. Do not place in hot water or near radiators, stoves or other sources of heat. Do not puncture or incinerate container or store at temperatures over 50°C or in direct sunlight.
<b>Handling</b>	Deliberate inhalation of contents can be extremely dangerous. If you feel unwell, seek medical advice (show label when possible). Avoid contact with skin and eyes.
<b>Waste Disposal</b>	Recycle to process, if possible. Consult your local or regional authorities. Do not dispose in sewers. When container is empty, press button to release all pressure, then dispose of in garbage can.
<b>Special Shipping Information</b>	None.

## SECTION 8: FIRST AID

<b>Eye Contact</b>	IMMEDIATELY flush eyes with lukewarm running water for at least 15 minutes, keeping eyelids open. Seek immediate medical advice.
<b>Skin Contact</b>	FLUSH IMMEDIATELY WITH WARM WATER. SEEK IMMEDIATE MEDICAL ATTENTION. Treat for frostbite if necessary.
<b>Hazardous Skin Contact</b>	No additional information.
<b>Slight Inhalation</b>	Remove affected person to fresh air. Get medical attention.
<b>Hazardous Inhalation</b>	No additional information.
<b>Slight Ingestion</b>	Contact with the mouth or any other tissue can cause severe frostbite. Get medical attention immediately.
<b>Hazardous Ingestion</b>	No additional information.

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## **SECTION 9: MSDS PREPARATION**

**References** Not available.

**No additional remark.**

**Validate by DEK Canada Inc. on February 27/09**

**Emergency Phone:** Please contact the Local Authorities or Poison Control Center

## **CLASSIFICATION**

**TDG Road/** CONSUMER COMMODITY.

Permit for Equivalent Level of Safety: TC – SU 5096.

**WHMIS** WHMIS CLASS A: Compressed gas.

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