



MATERIAL SAFETY DATA SHEET
Commercial Compressed Chemical
Cylinders (NOVEC - 1230
Fire Extinguishing Agent)

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATIONS

Product Name Chemical Compressed Cylinders (NOVEC 1230 Fire Extinguishing Agent)
Other Trade Names (FK-5-1-12)
Product Description Streaming and flooding fire protection
Manufacturer/Supplier Minimax – USA LLC
Address 4030 E. Quenton Drive Suite 112
Mesa, AZ 85215
USA
Phone Number (888) 882-0191
(480) 553-5670
ChemTel Number (888) 225-3924
(for emergencies only) (813) -248-0573 (International)
Revision Date: February 22,2012
MSDS Date: July 9, 2010

2. HAZARDS IDENTIFICATION

Non Hazardous Liquid

Routes of Entry

- Eye contact - Inhalation - Skin contact

Carcinogenic Status

See Section 11 - Toxicity

Target Organs

- Respiratory System - Skin - Eye

Health Effects - Eyes

Contact with the eyes during product use is not expected to result in significant irritation.

Health Effects - Skin

Contact with the skin during product use is not expected to result in significant irritation.

Health Effects - Ingestion

If thermal decomposition occurs: May be harmful if inhaled.

Health Effects - Inhalation

No health effects are expected

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#/Codes	Concentration	R Phrases	EU Classification
1,1,1,2,2,4,5,5-NONAFLUORO-4-(TRIFLUOROMETHYL)-3-PENTANONE	756-13-8	75 - 95%	None	None

Keep container in a well ventilated place

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4. FIRST AID MEASURES

Eyes

No need for first aid is anticipated

Skin

No need for first aid is anticipated

Ingestion

If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

If Swallowed

No need for first aid is anticipated.

5. FIRE - FIGHTING MEASURES

Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a blaze..

Unusual Fire and Explosion Hazards

Pressurized cylinders may explode in heat of fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Observe precautions from other sections. Call 3M- HELP Line (1-800-364-3577) for more information on handling and managing the spill. Ventilate the area with fresh air. Contain spill, cover drains, working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

7. HANDLING AND STORAGE

Pressurized cylinders should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll extinguishers. Do not drop cylinders or permit them to strike against each other. Never apply flame or localized heat directly to any part of the extinguisher or plastic container. Store pressurized cylinders and plastic containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits are listed below, if they exist.

1,1,1,2,2,4,5,5-Nonafluoro-4-(Trifluoromethyl)-3-Pentanone 150 ppm TWA

Engineering Control Measures

Use with adequate ventilation. When used in large volumes, use local exhaust ventilation.

Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. Avoid breathing of vapors, mists or spray. If thermal decomposition occurs, wear supplied air respiratory protection.

Hand Protection

Use leather gloves when handling cylinders

Eye Protection

Chemical goggles or safety glasses with side shields

Body Protection

Normal work wear

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Clear colorless
Odor	Odorless
Specific Gravity (WATER=1)	1.6
Boiling Range/Point (°C/F)	49 degrees C
Flash Point (PMCC) (°C/F)	Not Flammable
Solubility in Water	Not applicable
Vapor Density (Air = 1)	11.6
Vapor Pressure	244 mmHg
Evaporation Rate (BUOAC=1)	>1

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

- Avoid direct sunlight and ultraviolet light

Materials to Avoid

- Strong bases - Amines - Alcohols

Hazardous Polymerization

Will not occur.

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10. STABILITY AND REACTIVITY

Hazardous Decomposition Products

- Carbon monoxides - carbon dioxide – hydrogen fluoride

Hazardous Decomposition: Hydrogen fluoride has an ACGIH Threshold Limit Value of 3 Parts per million (a fluoride) as a Ceiling Limit and an OSHA PEL of 3 ppm of fluoride as an eight hour Time Weighted Average and 6 ppm of fluoride as a short term Exposure Limit. The odor threshold for HF is 0.04 ppm, providing good warning properties for exposure.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Low order of acute toxicity.

Chronic Toxicity/Carcinogenicity

This product is not expected to cause long term adverse health effects.

Genotoxicity

This product is not expected to cause any mutagenic effects.

Reproductive/Developmental Toxicity

This product is not expected to cause adverse reproductive effects.

12. ECOLOGICAL INFORMATION

Persistence/Degradability

No relevant studies identified.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

Please refer to existing literature on TFA

13. DISPOSAL CONSIDERATIONS

EPA Hazardous Waste Number (RCRA): Not regulated

Waste Disposal Method: Incineration , Combustion products will include HF. Facility cable of handling halogenated material.

Since regulations vary, consult applicable regulations or authorities before disposal.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data	Not regulated
UN Proper Shipping Name	NOVEC - 1230 (FK-5-1-12)
UN Class	
UN Number	1956
UN Packaging Group	II



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15. REGULATORY INFORMATION

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

The one components of this product is included in TSCA inventories.

EINECS Listing

One or more of the components of this product have been notified to (ELINCS) (European List of Notified or New Chemical Substances). Certain restrictions apply

All the components of this product are listed on China's Inventory of Chemical Substances.

The Component of this product are in compliance with the new chemical notification requirement for the Korean Existing Chemicals Inventory.

WHMIS Canadian Workplace Hazardous Material Identification System Rating

This product is rated **A** Compressed Gas.

The components of this product are in compliance with the chemical notification requirements of the National Industrial Chemical Notification and Assessment Scheme (NICNAS) of Australia, the Canadian Environmental Protection Act (CEPA) and the Ministry of Economy, Trade and Industry of Japan.

SARA Title III Sect. 311/312 Categorization

- Immediate (Acute) Health Hazard
- Pressure Hazard

SARA Title III Sect. 313

This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

Contact 3M for more information 1-800-364-3577 or (651) 737-6501 (24 hours)

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 1

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards – None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.



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HMIS Ratings

HMIS Code for Health - 1

HMIS Code for Flammability - 0

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of the chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for the use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Prepared By: Tom Lenartowicz

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