



Safety Data Sheet

This safety data sheet complies with the requirements of: 2012 OSHA Hazard Communication Standard (29CFR 1910.1200)

Product name 3M™ Novec™ 1230 Fire Protection Fluid [FK-5-1-12]

1. Identification

1.1. Product Identifier

Product name 3M™ Novec™ 1230 Fire Protection Fluid [FK-5-1-12]

1.2. Other means of identification

Product code 303207089
Synonyms None
Chemical Family No information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use No information available
Uses advised against Consumer use

1.4. Details of the Supplier of the Safety Data Sheet

Company Name Tyco Fire Protection Products
One Stanton Street
Marinette, WI 54143-2542
Telephone: 715-735-7411

Contact point Product Stewardship at 1-715-735-7411
E-mail address psra@tycofp.com

1.5. Emergency Telephone Number

Emergency telephone CHEMTREC 800-424-9300 or 703-527-3887

2. Hazards Identification

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Gases Under Pressure - Compressed Gas

2.2. Label Elements

Signal Word
WARNING

hazard statements

Contains gas under pressure; may explode if heated



Precautionary Statements



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Storage

Protect from sunlight. Store in a well-ventilated place.

2.3. Hazards Not Otherwise Classified (HNOC)

Contact with product may cause frostbite.

2.4. OTHER INFORMATION

3. Composition/information on Ingredients

3.1. Substance

The product contains no substances which at their given concentration, are considered to be hazardous to health

| Chemical name | CAS No | weight-% |
|--|----------|----------|
| 1,1,1,2,2,4,5,5,5-Nonafluoro-4-(trifluoromethyl)-3-pentanone | 756-13-8 | 60 - 100 |

4. First aid measures

4.1. Description of first aid measures

| | |
|---|---|
| General Advice | Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes. |
| Eye Contact | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| Skin contact | In case of contact with liquefied gas, thaw frosted parts with lukewarm water. |
| Inhalation | Administer oxygen if breathing is difficult. If breathing is irregular or stopped, administer artificial respiration. Move victim to fresh air. |
| Ingestion | None under normal use conditions. (Get medical attention immediately if symptoms occur.). |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. |

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms Unconsciousness.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians Keep victim warm and quiet.

5. Fire-fighting measures



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5.1. Suitable Extinguishing Media

Use extinguishing agent suitable for type of surrounding fire. Dry chemical or CO2. Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists.

5.2. Unsuitable Extinguishing Media

None.

5.3. Specific Hazards Arising from the Chemical

Ruptured cylinders may rocket. Some may burn but none ignite readily.

Hazardous Combustion Products Carbon oxides, Hydrogen fluoride

5.4. Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

5.5. Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions Do not touch or walk through spilled material. Stop leak if you can do it without risk.

OTHER INFORMATION

Ventilate the area.

For emergency responders Use personal protective equipment as required.

6.2. Environmental Precautions

Environmental Precautions Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for Containment If possible, turn leaking containers so that gas escapes rather than liquid. Allow substance to evaporate.

Methods for Cleaning Up Do not direct water at spill or source of leak.

7. Handling and Storage

7.1. Precautions for Safe Handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2. Conditions for safe storage, including any incompatibilities



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Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible Materials Strong bases, Amines, Alcohols.

8. Exposure Controls/Personal Protection

8.1. Control Parameters

Exposure guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2. Appropriate Engineering Controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

8.3. Individual protection measures, such as personal protective equipment

Eye/Face Protection

Avoid contact with eyes. Tight sealing safety goggles.

Skin and Body Protection

Wear protective gloves and protective clothing.

Respiratory Protection

Use positive pressure airline respirator with escape cylinder or self-contained breathing apparatus for oxygen-deficient atmospheres (<19.5%).

Ventilation

Use local exhaust or general dilution ventilation to control exposure with applicable limits

8.4. General hygiene considerations

Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

| | | | |
|-----------------------|-------------------|--------------|-----------|
| Physical State | Liquid | Color | Colorless |
| Odor | Characteristic | | |
| odor threshold | No data available | | |

| <u>Property</u> | <u>VALUES</u> | <u>Remarks • Method</u> |
|-------------------------------|-------------------|-------------------------|
| pH | No data available | |
| Melting point/freezing point | No data available | |
| Boiling point / boiling range | 49 °C / 120 °F | |
| Flash Point | No data available | |
| Evaporation Rate | No data available | |
| flammability (solid, gas) | No data available | |
| Flammability limit in air | | |
| Upper flammability limit: | No data available | |
| Lower flammability limit: | No data available | |
| Vapor Pressure | No data available | |
| Vapor Density | No data available | |
| Specific gravity | No data available | |



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| | |
|------------------------------|-------------------|
| Water Solubility | No data available |
| Solubility in Other Solvents | No data available |
| Partition coefficient | No data available |
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Kinematic viscosity | No data available |

10. Stability and Reactivity

10.1. Chemical Stability

Stable under recommended storage conditions.

10.2. Reactivity

No data available

10.3. Possibility of hazardous reactions

None under normal processing.

hazardous polymerization Hazardous polymerization does not occur.

10.4. Conditions to Avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible Materials

Strong bases, Amines, Alcohols.

10.6. Hazardous decomposition products

Carbon oxides. Hydrogen fluoride.

11. Toxicological Information

11.1. Information on Likely Routes of Exposure

Product information

| | |
|---------------------|--|
| INHALATION | In high concentration the gas may cause a suffocation. Victim may not be aware of asphyxiation. In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death. |
| Eye Contact | Contact with product may cause frostbite. |
| Skin contact | Contact with product may cause frostbite. |
| INGESTION | Not an expected route of exposure. |

Acute Toxicity



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11.2. Information on Toxicological Effects

Symptoms No information available.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

sensitization No information available.
Germ Cell Mutagenicity No information available
carcinogenicity No information available.
Reproductive Toxicity Lack of oxygen during pregnancy has produced developmental abnormalities in humans and experimental animals.
STOT - Single Exposure No information available.
STOT - Repeated Exposure No information available.
Target organ effects Respiratory System.
Aspiration Hazard No information available.

11.4. Numerical Measures of Toxicity - No information available

12. Ecological Information

12.1. ecotoxicity

Not classified

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

12.2. Persistence and Degradability

No information available.

12.3. Bioaccumulation

No information available.

12.4. Other Adverse Effects

No information available

13. Disposal Considerations

13.1. Waste Treatment Methods

Disposal of wastes This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Do not reuse container. Pressurized container: Do not pierce or burn, even after use.

14. Transport Information



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| | |
|-------------------|---------------|
| <u>DOT</u> | NOT REGULATED |
| <u>TDG</u> | NOT REGULATED |
| <u>MEX</u> | NOT REGULATED |
| <u>ICAO (air)</u> | NOT REGULATED |
| <u>IATA</u> | NOT REGULATED |
| <u>IMDG</u> | NOT REGULATED |

15. Regulatory Information

15.1. International Inventories

| | |
|----------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Complies |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute Health Hazard | No |
| Chronic health hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | Yes |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material



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15.3. US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

16. Other information, including date of preparation of the last revision

| | | | | |
|-------------|------------------|----------------|--------------------|------------------------------------|
| <u>NFPA</u> | Health Hazards 3 | flammability 0 | Instability 0 | Physical and chemical properties - |
| <u>HMIS</u> | Health Hazards 0 | flammability 0 | Physical Hazards 3 | Personal Protection X |

Revision date 25-May-2015

Revision note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet