FlameStop

SAFETY DATA SHEET

REVISION EDITION NO: **1**
DATE: **31/07/2019**
SUPERSEDES: **07 / 05 / 2019**

FlameStop NSW (Head Office)
16 Davis Road, WETHERILL PARK, NSW. 2164. AUSTRALIA
Phone: 02 9725 3322 I **Fax:** 02 9725 1262 I **Email:** sales@flamestop.com.au

SECTION 1 - IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

PRODUCT IDENTIFIER:

3M™ NOVEC™ 1230 (FIRE EXTINGUISHING AGENT, PRESSURIZED AND NON-PRESSURIZED)

OTHER MEANS OF IDENTIFICATION:

NONE

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

Use of substance / mixture: fire extinguishing agent

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

Supplier:	FlameStop
Street:	16 Davis Road
Postal code/city:	Wetherill Park, NSW. 2164
Country:	Australia
Telephone:	+61 2 9725 3322 - 7am-4:30pm AET Mon-Fri
Telefax:	+61 2 9725 1262 - 7am-4:30pm AET Mon-Fri
E-mail:	sales@flamestop.com.au
Website:	http://www.flamestop.com.au
Dept. responsible for information:	Compliance

EMERGENCY CONTACT NUMBER: +61 425 342 729

SAFETY DATA SHEET PREPARED IN ACCORDANCE WITH OSHA'S HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)AND THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)

SECTION 2 - HAZARD(S) IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

This SDS covers the product listed above as sold in pressurized and non-pressurized containers. GHS classifications for both forms are listed below.

GHS Classification – Pressurized

Hazard Classification:
Chronic hazard to the aquatic environment - Category 3 (This classification not adopted by OSHA)
Gas under pressure – Compressed gas

LABEL ELEMENTS

Hazard pictograms	
Pictogram code	GHS04 Gas Cylinder
Signal word	**WARNING**
Hazard statements	
Physical Hazards	**H280** Contains gas under pressure; may explode if heated.
Health Hazards	
Environmental Hazards	**H412** Harmful to aquatic life with long lasting effects.
Combinations	
Precautionary statements	
General	
Prevention	**P273** Avoid release to the environment
Response	
Storage	**P410+P403** Protect from sunlight. Store in a well ventilated space.
Disposal	**P501** Dispose of contents/container in accordance with local regulation.

OTHER HAZARDS:

None.

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

GHS Classification – Non-pressurized

Hazard Classification:
Chronic hazard to the aquatic environment - Category 3 (This classification not adopted by OSHA)

LABEL ELEMENTS

Hazard pictograms	None
Pictogram code	None
Signal word	**None**
Hazard statements	
Physical Hazards	
Health Hazards	
Environmental Hazards	**H412** Harmful to aquatic life with long lasting effects.
Combinations	
Precautionary statements	
General	
Prevention	**P273** Avoid release to the environment
Response	
Storage	
Disposal	**P501** Dispose of contents/container in accordance with local regulation.

OTHER HAZARDS:

None.

SECTION 2 - HAZARD(S) IDENTIFICATION (CONTINUED)

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	0%
Acute dermal toxicity	0%
Acute inhalation toxicity	0%
Acute aquatic toxicity	0%

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

MIXTURE INGREDIENTS

This product is a substance.

Component	CAS No.	Percentage of Ingredients
1,1,1,2,2,4,5,5,5,-Nonafluoro-4-(trifluoromethyl)-3-pentanone	756-13-8	>99.9%

Note: Pressurised product uses nitrogen as the expellant.

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

After inhalation

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

After skin contact

Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

After eye contact

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

After ingestion

Rinse mouth. Obtain medical attention if you feel unwell.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE, DELAYED AND AGGREVATED

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

EXTINGUISHING MEDIA

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a blaze. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Predominant decomposition product is hydrogen fluoride in fire situations. By-products are irritating and potentially toxic. Pressurized containers may explode in heat of fire.

ADVICE FOR FIREFIGHTERS

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

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

ENVIRONMENTAL PRECAUTIONS

Prevent large quantities of the material from entering drains or watercourses.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Precautions for safe handling

Wear appropriate protective clothing.

Conditions for safe storage

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

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

CONTROL PARAMETERS / OCCUPATIONAL EXPOSURE LIMIT VALUES

3M™ Novec™ 1230

Manufacturer's recommended exposure limit: 150 ppm, 8 hr TWA

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS

Appropriate engineering controls:

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Individual protective measures, e.g. Personal Protective Equipment:

Respiratory Protection

Wear respiratory protection if there is a risk of exposure to high vapor concentrations, aerosols or if material is exposed to extreme overheating. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Skin Protection - Gloves

Eye/Face Protection - Chemical goggles or safety glasses with side shields.

Body Protection - Normal work wear.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Non- Pressurized	
Appearance **Physical State** **Color**	 Liquid Colorless
Odor	Slight
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	1.6
Boiling Range/Point (°C/F)	49.2 °C/120.6 °F
Melting Point (°C/F)	-108 °C/-162.4 °F
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	0.404 bar (5.87 psig) @ 25 °C
Evaporation Rate (BuAc=1)	>1
Solubility in Water	Nil
Vapor Density (Air = 1)	11.6
VOC (g/l)	1600 g/l
VOC (%)	100%
Partition coefficient (n-octanol/water)	No data available
Viscosity	0.6 centipoise @ 25 °C
Auto-ignition Temperature	Not applicable
Decomposition Temperature	No data available
Upper explosive limit	None detected
Lower explosive limit	None detected
Flammability (solid, gas)	No data available

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Expellant - Nitrogen	
Appearance **Physical State** **Color**	 Compressed gas Colorless
Odor	None
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	No data available
Gas Density	0.075 lb/ft^3 @70^{o}F as vapor
Boiling Range/Point (°C/F)	-196^{o}C/-321 ^{o}F
Melting Point (°C/F)	-210^{o}C/-346 ^{o}F
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	0.2 g/l
Vapor Density (Air = 1)	0.97
VOC (g/l)	None
VOC (%)	None
Partition coefficient (n-octanol/water)	No data available
Viscosity	Not applicable
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	Not explosive
Lower explosive limit	Not explosive
Flammability (solid, gas)	Not flammable

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY

Pressurized containers may rupture or explode if exposed to heat.

CHEMICAL STABILITY

Stable under normal conditions.

POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous polymerization will not occur.

CONDITIONS TO AVOID

Exposure to direct sunlight - ultraviolet light - contact with incompatible materials.

SECTION 10 - STABILITY AND REACTIVITY (CONTINUED)

INCOMPATIBLE MATERIALS

Materials to avoid:

None.

HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of carbon - hydrogen fluoride - perfluoroisobutylene

SECTION 11 - TOXILOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Respiratory or Skin Sensitization

3M™ Novec™ 1230: Did not cause skin sensitization in guinea pig study.

Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity

3M™ Novec™ 1230: Not mutagenic in both in vivo and in vitro testing.

Reproductive Toxicity

3M™ Novec™ 1230: Not toxic to male reproduction, female reproduction or development in rat inhalation study. The NOAEL was determined to be 3000ppm.

Aspiration Hazard

Not an aspiration hazard.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY

3M™ Novec™ 1230

LC50 Zebra fish >1200mg/l 96h

EC50 Daphnia magna >1200mg/l 48h

EC50 Green algae 7.7mg/l 72h Classified by ECHA as Aquatic Chronic 3: Harmful to aquatic life with long lasting effects.

MOBILITY IN SOIL

3M™ Novec™ 1230: Product is highly insoluble in water and volatile.

PERSISTENCE/DEGRADABILITY

3M™ Novec™ 1230: Photolytic half-life: 3 - 5 days. Persistent Photolytic degradation product: trifluoroacetic acid.

SECTION 13 - DISPOSABLE CONSIDERATIONS

DISPOSABLE METHODS

Dispose of container in accordance with all applicable local and national regulations.

SECTION 14 - TRANSPORT INFORMATION

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment. Specific volumes, pressures or hardware configurations containing such materials can dictate various different hazard classifications for transportation and labelling requirements. Under Federal Regulations only trained and qualified individuals are permitted to label and ship products following the applicable Department of Transportation (DOT), Federal Aviation Administration (FAA), Transport Canada (TC), International Maritime Dangerous Goods (IMDG) or International Air Transport Association (IATA) requirements.

SECTION 15 - REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

United States TSCA Inventory

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

Canada DSL Inventory

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

SARA Title III Sect. 311/312 Categorization: Pressurized

Pressure hazard

SARA Title III Sect. 311/312 Categorization: Non-pressurized

None

SARA Title III Sect. 313

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

SECTION 16 - OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 3

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 1

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Health - 1

HMIS Code for Flammability - 0

HMIS Code for Physical Hazard - 1

HMIS Code for Personal Protection - See Section 8

*Chronic

LEGEND

ACGIH: American Conference of Governmental Industrial Hygienists
CAS#: Chemical Abstracts Service Number
ECHA: European Chemicals Agency
EC50: Effect Concentration 50%
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

DISCLAIMER

The information is based on the best knowledge of FlameStop Australia Pty Ltd and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

Please refer to our internet website for more information: www.flamestop.com.au
SDS sheets are available to download in the downloads section of our website.
For contact information please go to page 1 of this SDS.

END OF SDS.