

Safety Data Sheet

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2024 and GHS Rev 07

Date of issue: 02/19/2026

Revised on 02/19/2026

1 Identification

· **Product Identifier**

· **Trade Name: NuTherm® HT 120**

· **Relevant identified uses of the substance or mixture and uses advised against:**

· **Product Description:**

NuTherm® HT 120 is a non-flammable, low-viscosity, thermally stable hydrofluoroether (HFE) heat transfer fluid designed for advanced thermal-management systems requiring safe, efficient, and environmentally responsible cooling.

· **Details of the Supplier of the Safety Data Sheet:**

· **Manufacturer/Supplier:**

NuGeneration Technologies, LLC (dba NuGenTec)

1155 Park Avenue, Emeryville, CA 94608

salesteam@nugentec.com

www.nugentec.com

1-888-996-8436 or 1-707-820-4080 for product information

· **Emergency telephone number:**

PERS Emergency Response: US and Canada - 1-800-633-8253, International 1-801-629-0667

2 Hazard(s) Identification

· **Classification of the substance or mixture:**

The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.

· **Label elements:**

· **Hazard pictograms:** Non-Regulated Material

· **Signal word:** Non-Regulated Material

· **Hazard statements:** Non-Regulated Material

· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values. 135 % of the mixture consists of component(s) of unknown toxicity.

· **Information pertaining to particular dangers for man and environment:**

· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 0

Physical Hazard = 0

· **Hazard(s) not otherwise classified (HNOC):** None known

· **Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

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- **Hazards not otherwise classified**
There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/Information on Ingredients

- **Chemical characterization: Substance**
- **Description:**
Mixture of substances listed with non-hazardous additions and/or components that are less than listing threshold. All non-hazardous, components listed under threshold, and listed component total 100%.

- **Dangerous Components:**

163702-06-5	Ethyl nonafluoroisobutyl ether	⚠ Acute toxicity - oral 4, H302	40-90%
163702-05-4	Ethyl nonafluorobutyl ether	⚠ Acute toxicity - dermal 4, H312	5-50%

- **Additional information:**
The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

- **Description of first aid measures**
- **General information:** If symptoms persist, call a physician.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Generally, the product does not irritate the skin.
If skin irritation occurs, consult a doctor.
- **After eye contact:**
If eye irritation occurs, consult a doctor.
Rinse opened eye for several minutes under running water.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Most important symptoms and effects, both acute and delayed:**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
Treat symptomatically.

5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:**
Exposure to extreme heat can give rise to thermal decomposition. Material displays no closed-cup flash point but may form flammable/explosive vapor air mixture

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- **Advice for firefighters**
- **Special protective equipment for firefighters:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**
Not required
Keep away from sparks, flames, and extreme heat. Evacuate area. Ventilate the area with fresh air. Observe precautions from other sections.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust). Dispose of the collected material according to regulations.

· PAC-1: None of the ingredients are listed.
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· PAC-2: None of the ingredients are listed.
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· PAC-3: None of the ingredients are listed.
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- **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Precautions for safe handling:**
Do not breathe thermal decomposition products. For industrial/occupational use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products. Keep away from sparks, flames, and extreme heat.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **Information about storage in one common storage facility:** Not required
- **Further information about storage conditions:** None.

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· **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

· **Control parameters:**

· **Components with occupational exposure limits:**

163702-06-5 Ethyl nonafluoroisobutyl ether

TWA 200 ppm (as total isomers; manufacturer determined)

163702-05-4 Ethyl nonafluorobutyl ether

TWA 200 ppm (as total isomer; manufacturer determined)

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**

· **Appropriate engineering controls** No further data; see section 7.

· **Personal protective equipment**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required

· **Protection of hands:** Not required

· **Material of gloves:** Not applicable.

· **Penetration time of glove material:** Not applicable.

· **Eye protection:**



Goggles recommended during refilling.

· **Limitation and supervision of exposure into the environment:** None

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Color:**

Clear

· **Odor:**

Characterastic

· **Odor threshold:**

Not determined

· **Melting point/Melting range:**

Not determined.

· **Boiling point/Boiling range:**

76 °C (168.8 °F)

· **Flammability:**

Not applicable

· **Explosion limits:**

· **Lower:**

Not determined

· **Upper:**

Not determined

· **Flash point:**

None

· **Auto igniting:**

Not applicable

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· Decomposition temperature:	Not determined
· pH-value:	Not determined.
· Viscosity:	
· Kinematic:	Not determined
· Dynamic:	Not determined
· Solubility in / Miscibility with:	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined
· Vapor pressure @ 20 °C (68 °F):	16 kPa
· Vapor pressure:	
· Density:	Not determined
· Relative density:	Not determined
· Vapor density:	Not determined
· Particle characteristics	Not applicable
· Other information:	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Solvent content:	
· VOC content:	0.00 %
· Solids content:	0.0 %
· Change in condition	
· Evaporation rate:	Not determined

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Product is stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Sparks and/or flames
- **Incompatible materials:**
Strong acids
Strong bases
Strong oxidizing agents
- **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological Information

· **Information on toxicological effects:**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

163702-06-5 Ethyl nonafluoroisobutyl ether

Oral	LD50	2,000-5,000 mg/kg (not defined)
Dermal	LD50	>2,000 mg/kg (Rat)
Inhalative	LC50/4 h	>989 mg/l (Rat)

163702-05-4 Ethyl nonafluorobutyl ether

Oral	LD50	>2,000 mg/kg (Rat)
Dermal	LD50	2,000-5,000 mg/kg (not defined)
Inhalative	LC50/4 h	>989 mg/l (Rat)

· **Primary irritant effect:**

· **On the skin:**

163702-06-5 Ethyl nonafluoroisobutyl ether

Irritation of skin	Skin Irritation	(rabbit) No significant irritation
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163702-05-4 Ethyl nonafluorobutyl ether

Irritation of skin	Skin Irritation	(rabbit) No significant irritation
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· **On the eye:**

163702-06-5 Ethyl nonafluoroisobutyl ether

Irritation of eyes	Eye Irritation	(rabbit) No significant irritation
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163702-05-4 Ethyl nonafluorobutyl ether

Irritation of eyes	Eye Irritation	(rabbit) No significant irritation
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· **Sensitization:**

163702-06-5 Ethyl nonafluoroisobutyl ether

Sensitization	Skin Sensitization	(guinea pig) Not classified
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163702-05-4 Ethyl nonafluorobutyl ether

Sensitization	Skin Sensitization	(guinea pig) Not classified
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· **Additional toxicological information:**

· **Interactive effects** No interactive effects between components are known.

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

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· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

12 Ecological Information

- **Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable
- **vPvB:** Not applicable
- **Other adverse effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:** Harmful to aquatic organisms

13 Disposal Considerations

- **Waste treatment methods**
- **Recommendation:**
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packaging**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport Information

- | | |
|--|------------------------|
| · UN-Number: | |
| · DOT, ADR/ADN, IMDG, IATA | Non-Regulated Material |
| · UN proper shipping name: | |
| · DOT, ADR/ADN, IMDG, IATA | Non-Regulated Material |
| · Transport hazard class(es): | |
| · DOT, ADR/ADN, ADN, IMDG, IATA | |
| · Class: | Non-Regulated Material |
| · Packing group: | |
| · DOT, ADR/ADN, IMDG, IATA | Non-Regulated Material |

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Trade Name: NuTherm® HT 120

· Environmental hazards:	Not applicable
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable
· Special precautions for user:	Not applicable
· UN "Model Regulation":	Non-Regulated Material

15 Regulatory Information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
No further relevant information available.

· **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients are listed.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

None of the ingredients are listed.

· **New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

· **Pennsylvania Right-to-Know List:**

None of the ingredients are listed.

· **Pennsylvania Special Hazardous Substance List:**

None of the ingredients are listed.

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· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements** Non-Regulated Material

· **Hazard pictograms:** Non-Regulated Material

· **Signal word:** Non-Regulated Material

· **Hazard statements:** Non-Regulated Material

· **National regulations:**

The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation** 02/19/2026

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute toxicity - oral 4: Acute toxicity – Category 4

· *** Data compared to the previous version altered.**

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