

# Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and  
OSHA GHS

Printing date: March 23, 2016

Revision: March 23, 2016

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

- Trade name: **3M Novec™ Engineered Fluid HFE-7100**
- Product code: 1-2720 (1004086)

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Sector of Use

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

#### Application of the substance / the mixture:

Forensic examination.  
Laboratory chemicals

· **Uses advised against:** Contact manufacturer.

### 1.3 Details of the supplier of the Safety Data Sheet

#### Manufacturer/Supplier:

Safariland, LLC  
13386 International Parkway  
Jacksonville, FL 32218  
Customer Care (800) 347-1200



### 1.4 Emergency telephone number:

ChemTel Inc.  
+1 (800)255-3924, +1 (813)248-0585

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

The product is not classified as hazardous according to the Globally Harmonized System (GHS).  
The product is not classified as hazardous according to the CLP regulation.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008

This product does not have a classification according to the CLP regulation.

· **Hazard pictograms** Not Regulated

· **Signal word** Not Regulated

· **Hazard-determining components of labelling:** Not applicable.

· **Hazard statements** Not Regulated

· **Precautionary statements** Not Regulated.

### 2.3 Other hazards

There are no other hazards not otherwise classified that have been identified.

#### Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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## SECTION 3: Composition/information on ingredients

### · 3.2 Mixtures

· **Components:** None in reportable quantities.

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentages are being withheld as a trade secret.  
For the wording of the listed Hazard Statements refer to section 16.

## SECTION 4: First aid measures

### · 4.1 Description of first aid measures

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Generally the product does not irritate the skin.

Wash with soap and water.

If skin irritation is experienced, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

### · 4.2 Most important symptoms and effects, both acute and delayed

Gastric or intestinal disorders when ingested.

· **Hazards:** No further relevant information available.

### · 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## SECTION 5: Firefighting measures

### · 5.1 Extinguishing media

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** None.

### · 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

### · 5.3 Advice for firefighters

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information:** Cool endangered product with water spray.

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## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
For large spills, wear protective clothing.
- **6.2 Environmental precautions** No special measures required.
- **6.3 Methods and material for containment and cleaning up**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of the material collected according to regulations.
- **6.4 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.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Avoid splashes or spray in enclosed areas.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Do not store together with oxidising and acidic materials.  
Do not store together with alkalis (caustic solutions).  
Store away from foodstuffs.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **DNELs:** No further relevant information available.
- **PNECs:** No further relevant information available.
- **8.2 Exposure controls**
- **Engineering measures** Provide adequate ventilation.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.  
Keep away from foodstuffs, beverages and feed.

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Avoid contact with the eyes.

· **Respiratory protection:**

Not required under normal conditions of use.

Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:** Gloves not required under normal conditions of use.

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:**

Not required under normal conditions of use.

Protection may be required for spills.

· **Limitation and supervision of exposure into the environment:** No special requirements.

· **Risk management measures:** No special requirements.

## SECTION 9: Physical and chemical properties

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

· **Appearance**

Form:

Liquid

Colour:

Colourless

· **Odour:**

Slight, ethereal

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Melting point/Melting range:**

-135 °C (-211 °F)

· **Boiling point/Boiling range:**

61 °C (142 °F)

· **Flash point:**

The product will not flash.

· **Flammability (solid, gaseous):**

Not applicable.

· **Auto/Self-ignition temperature:**

405 °C (761 °F)

· **Decomposition temperature:**

Not determined.

· **Self-igniting:**

Product is not self-igniting.

· **Danger of explosion:**

Product does not present an explosion hazard.

· **Explosion limits**

Lower:

Not determined.

Upper:

Not determined.

· **Oxidising properties**

Not determined.

· **Vapour pressure at 25 °C (77 °F):**

269 hPa (202 mm Hg) (202 mm Hg)

· **Density at 20 °C (68 °F):**

1,5 g/cm<sup>3</sup> (12,518 lbs/gal)

· **Relative density:**

Not determined.

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· <b>Vapour density at 20 °C (68 °F):</b>	11 g/m <sup>3</sup> (8.6 / air = 1.0)
· <b>Evaporation rate at 20 °C (68 °F):</b>	49 (n-Butyl Acetate = 1.0)
· <b>Solubility in / Miscibility with water at 20 °C (68 °F):</b>	12 ppm
· <b>Partition coefficient (n-octanol/water) at 30 °C (86 °F):</b>	3,9 log POW
· <b>Viscosity</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
VOC content:	100 Vol %
· <b>9.2 Other information</b>	No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.  
Toxic fumes may be released if heated above the decomposition point.
- **10.3 Possibility of hazardous reactions**  
Reacts with strong acids and alkali.  
Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials** Oxidizers, strong bases, strong acids
- **10.6 Hazardous decomposition products**  
  
Under fire conditions only:  
Hydrogen fluoride  
Danger of toxic fluorine based pyrolysis products.

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect**
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **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.

· **Probable routes of exposure:**

Ingestion.

Inhalation.

Eye contact.

Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):** From product as supplied: None.

· **Repeated dose toxicity:** From product as supplied: None.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:** Not known to be hazardous to water.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Smaller quantities can be disposed of with household waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

- |  |                 |
|--|-----------------|
| <b>· 14.1 UN-Number</b>  |                 |
| · DOT, ADR, IMDG, IATA   | Not Regulated   |
| <b>· 14.2 UN proper shipping name</b>  |                 |
| · DOT, ADR, IMDG, IATA   | Not Regulated   |
| <b>· 14.3 Transport hazard class(es)</b>   |                 |
| · DOT, ADR, IMDG, IATA   |                 |
| · Class  | Not Regulated   |
| <b>· 14.4 Packing group</b>  |                 |
| · DOT, ADR, IMDG, IATA   | Not Regulated   |
| <b>· 14.5 Environmental hazards:</b>   | Not applicable. |
| <b>· 14.6 Special precautions for user</b>                                       | Not applicable. |
| <b>· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - United States (USA)
  - SARA
- |  |                                     |
|--|-------------------------------------|
| <b>· Section 355 (extremely hazardous substances):</b>               |                                     |
|  | None of the ingredients are listed. |
| <b>· Section 313 (Specific toxic chemical listings):</b>             |                                     |
|  | None of the ingredients are listed. |
| <b>· TSCA (Toxic Substances Control Act):</b>                        |                                     |
|  | All ingredients are listed.         |
| <b>· Proposition 65 (California):</b>                                |                                     |
| <b>· Chemicals known to cause cancer:</b>                            |                                     |
|  | None of the ingredients are listed. |
| <b>· Chemicals known to cause reproductive toxicity for females:</b> |                                     |
|  | None of the ingredients are listed. |

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· **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.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients are listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

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

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

· **Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))

Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/))

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Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN:  
978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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