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## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name: PERFLUORO-n-HEPTANE  
Synonyms: Hexadecafluoroheptane  
Product number: C7  
CAS-No.: 335-57-9

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

**Recommended use:** For industrial use only. Suitable replacement for 3M Performance Fluid PF-5070 for most applications eg. as a heat transfer fluid or for use in a solvent deposition application.

**Restrictions on use:** Not intended for use as a medical device or drug.

### 1.3 Details of the supplier of the safety data sheet

Company: Exflor Research Corporation  
2350 Double Creek Drive  
ROUND ROCK, TEXAS 78664  
USA

Telephone: +1-512-310-9044

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## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Not classified as hazardous according to OSHA

### 2.2 GHS Label Elements, including precautionary statements

**Signal word** Not applicable

**Symbols** Not applicable

**Pictograms** Not applicable

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

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## 3. COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula:  $C_7F_{16}$   
Molecular Weight: 388.05 g/mol

**Component:**

CAS-No.: 335-57-9  
EC-No.: 206-392-1  
Concentration: 98 %

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## 4. FIRST AID MEASURES

### 4.1 Description of first-aid measures

#### **If inhaled**

Remove victim to fresh air. If you feel unwell, get medical attention.

#### **In case of skin contact**

Wash with soap and water. If signs/symptoms develop, get medical attention.

#### **In case of eye contact**

Flush eyes with plenty of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

#### **If swallowed**

No need for first aid is anticipated.

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

See section 11.

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

Not applicable

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## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Non-combustible. Use a fire fighting agent suitable for surrounding fire.

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

Exposure to extreme heat can give off toxic fumes of carbon oxides and hydrogen fluoride.

### 5.3 Advice for firefighters

When firefighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

### 5.4 Further information

No data available

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment, and emergency measures

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

### 6.2 Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

### 6.3 Methods and materials for containment and cleaning up

Soak up the spill with an inert absorbent material, such as dry lime, soda ash, bentonite, vermiculite, or commercially available inorganic absorbent material. Place in container for disposal according to local regulations.

### 6.4 Reference to other sections

Refer to protective measures listed in § 7 and § 8.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

For precautions, see § 2.2. Do not breathe thermal decomposition products. Avoid skin contact with hot material. For industrial or professional use only. Store work clothes separately from other clothing, food and tobacco products. Keep away from alkali metals to avoid the formation of hydrogen gas that could create an explosion hazard. 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.

### 7.2 Conditions for safe storage, including any incompatibilities

Store away from heat.

### 7.3 Specific use(s)

Apart from the uses mentioned in § 1.2 no other specific uses are stipulated.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Provide appropriate local exhaust when product is heated.

#### Personal protective equipment

##### Eye/face protection

None required.

##### Skin protection

No protective gloves required.

##### Body protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

During heating: Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

##### Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|    |  |                              |
|----|--|------------------------------|
| a) | Appearance                                   | clear/ light yellow liquid   |
| b) | Odor   | odorless liquid              |
| c) | Odor threshold                               | no data available            |
| d) | pH   | no data available            |
| e) | Melting/freezing point                       | no data available            |
| f) | Initial boiling point/range                  | 80-82 °C (178-181 °F) – lit. |
| g) | Flash point                                  | no data available            |
| h) | Evaporation rate                             | no data available            |
| i) | Flammability (solid, gas)                    | no data available            |
| j) | Upper/lower flammability or explosive limits | no data available            |

|    |  |  |
|----|--|--|
| k) | Vapor pressure                         | 79 mm Hg [@ 20°C]                        |
| l) | Vapor density                          | 13.4 [@ 20°C][ <i>Ref std: WATER=1</i> ] |
| m) | Relative density                       | no data available                        |
| n) | Solubility                             | no data available                        |
| o) | Partition coefficient: n-octanol/water | no data available                        |
| p) | Auto-ignition temperature              | no data available                        |
| q) | Decomposition temperature              | no data available                        |
| r) | Viscosity                              | 0.7 centistoke[@ 20°C]                   |
| s) | Explosive properties                   | no data available                        |
| t) | Oxidizing properties                   | no data available                        |

## 9.2 Other safety information

|                  |       |
|------------------|-------|
| Refractive index | 1.269 |
| Specific gravity | 1.72  |

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No unusual reactivity. See § 10.5.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reaction

Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

Extreme heat

### 10.5 Incompatible materials

Finely divided active metals  
Alkali and alkaline earth metals

### 10.6 Hazardous decomposition products

Releases toxic fumes of carbon oxides and hydrogen fluoride - greater than 200°C

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

#### Skin corrosion/ irritation

No significant irritation

#### Serious eye damage/ irritation

No significant irritation

#### Respiratory or skin sensitization

No data currently available or the data not sufficient for classification.

#### Germ cell mutagenicity

In vitro not mutagenic

#### Carcinogenicity

No data currently available or the data not sufficient for classification.

**Reproductive toxicity**

No data available

**Specific target organ toxicity – single exposure**

No data available

**Specific target organ toxicity -- repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional information**

RTECS: MJ0875000

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

**12.6 Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Refer to protective measure listed in § 7 and § 8.

Dispose of in accordance with all applicable federal, state, and local regulations.

Place in a chemical secured landfill or incinerate at 1200°C with a 2 second dwell time or at 1600°C with a 1.5 second dwell time. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Empty containers retain residue and can be dangerous. Disposal must be made according to official regulations.

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**14. TRANSPORTATION INFORMATION****DOT (US) / IMDG / IATA**

Not classified as hazardous for transport

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**15. REGULATORY INFORMATION****US federal information**

Included on TSCA Inventory.

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**16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Exflur Research Corporation shall not be held liable for any damage resulting from handling or from contact with the above product.