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

#### 1.1. Product identifier
- **Product form**: Substance
- **Substance name**: Octafluoropropane
- **IUPAC name**: 1,1,1,2,2,3,3,3-Octafluoropropane
- **EC-No.**: 200-941-9
- **CAS-No.**: 76-19-7
- **REACH registration No**: 01-2119948589-16
- **Formula**: C₃F₈
- **Synonyms**: Perfluoropropane, R218

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

**1.2.1. Relevant identified uses**
- **Main use category**: Industrial use, Professional use

**1.2.2. Uses advised against**
- No additional information available

#### 1.3. Details of the supplier of the safety data sheet
- **Manufacturer**: F2 Chemicals Ltd
- **Address**: Lea Lane, Lea Town, PR4 0RZ Preston - UK
- **T**: +44 (0) 1772 775800
- **safety@f2chemicals.com**

#### 1.4. Emergency telephone number
- **Emergency number**: +44 (0) 1772 775833 (24 hr)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**
- **Press. Gas (Liq.)**: H280

**Adverse physicochemical, human health and environmental effects**
- Contains gas under pressure; may explode if heated.

**2.2. Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**
- **Hazard pictograms (CLP)**
  - ![GHS04](https://example.com/image)
- **Signal word (CLP)**: Warning
- **Hazard statements (CLP)**: H280 - Contains gas under pressure; may explode if heated.

#### 2.3. Other hazards
- No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances
- **Substance type**: Mono-constituent
Octafluoropropane
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octafluoropropane</td>
<td>(CAS-No.) 76-19-7 (EC-No.) 200-941-9 (REACH-no) 01-211948589-16</td>
<td>100</td>
<td>Press. Gas (Liq.), H280</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed
No additional information available

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Protect from sunlight. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)
No additional information available
SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Appropriate engineering controls:
Ensure good ventilation of the work station.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Gas</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless gas.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>( \approx 188 \text{ g/mol} )</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>( \approx -183 \degree \text{C} )</td>
</tr>
<tr>
<td>Boiling point</td>
<td>( \approx -36.7 \degree \text{C} )</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable (non-flammable gas)</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>( \approx 72 \degree \text{C} )</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable (non-flammable gas)</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>( &gt; 400 \degree \text{C} )</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>( \approx 820 \text{ kPa} )</td>
</tr>
<tr>
<td>Relative vapour density at 20 \degree\text{C}</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>( \approx 1.32 )</td>
</tr>
<tr>
<td>Relative gas density</td>
<td>( \approx 9.7 )</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>None.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>None.</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not applicable (non-flammable gas)</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.
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10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4 Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5 Incompatible materials
No additional information available

10.6 Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1 Toxicity
Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

12.2 Persistence and degradability
No additional information available

12.3 Bioaccumulative potential
No additional information available

12.4 Mobility in soil
No additional information available

12.5 Results of PBT and vPvB assessment
No additional information available

12.6 Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.
SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>UN number</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1</td>
<td>2424</td>
<td>2424</td>
<td>2424</td>
<td>2424</td>
<td>2424</td>
</tr>
</tbody>
</table>

14.2 UN proper shipping name

OCTAFLUOROPROPANE (REFRIGERANT GAS R 218)

OCTAFLUOROPROPANE (REFRIGERANT GAS R 218)

Octafluoropropane

OCTAFLUOROPROPANE (REFRIGERANT GAS R 218)

OCTAFLUOROPROPANE (REFRIGERANT GAS R 218)

Transport document description

UN 2424 OCTAFLUOROPROPANE (REFRIGERANT GAS R 218), 2.2, (C/E)

UN 2424 OCTAFLUOROPROPANE (REFRIGERANT GAS R 218), 2.2

UN 2424 Octafluoropropane, 2.2

UN 2424 OCTAFLUOROPROPANE (REFRIGERANT GAS R 218), 2.2

UN 2424 OCTAFLUOROPROPANE (REFRIGERANT GAS R 218), 2.2

14.3 Transport hazard class(es)

2.2

2.2

2.2

2.2

2.2

14.4 Packing group

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

14.5 Environmental hazards

Dangerous for the environment : No

Dangerous for the environment : No

Dangerous for the environment : No

Dangerous for the environment : No

No supplementary information available

14.6 Special precautions for user

- Overland transport

Classification code (ADR) : 2A

Special provisions (ADR) : 662

Limited quantities (ADR) : 120ml

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P200

Mixed packing provisions (ADR) : MP9

Portable tank and bulk container instructions (ADR) : (M), T50

Tank code (ADR) : PxBN(M)

Tank special provisions (ADR) : TA4, TT9

Vehicle for tank carriage : AT

Transport category (ADR) : 3

Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36

Hazard identification number (Kemler No.) : 20

Orange plates : 20 2424

Tunnel restriction code (ADR) : C/E

EAC code : 2TE

- Transport by sea

Packing instructions (IMDG) : P200

Tank instructions (IMDG) : T50

EmS-No. (Fire) : F-C

EmS-No. (Spillage) : S-V

Stowage category (IMDG) : A

Properties and observations (IMDG) : Liquefied, non-flammable, colourless gas. Much heavier than air (6.6). Boiling point:-36°C.
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- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden
PCA packing instructions (IATA) : 200
PCA max net quantity (IATA) : 75kg
CAO packing instructions (IATA) : 200
CAO max net quantity (IATA) : 150kg
ERG code (IATA) : 2L

- Inland waterway transport

Classification code (ADN) : 2A
Special provisions (ADN) : 662
Limited quantities (ADN) : 120 ml
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP
Number of blue cones/lights (ADN) : 0

- Rail transport

Special provisions (RID) : 662
Excepted quantities (RID) : E1
Packing instructions (RID) : P200
Mixed packing provisions (RID) : MP9
Portable tank and bulk container instructions (RID) : T50(M)
Special provisions for RID tanks (RID) : TA4, TT9, TM6
Transport category (RID) : 3
Special provisions for carriage - Loading, unloading and handling (RID) : CW9, CW10, CW36
Colis express (express parcels) (RID) : CE3
Hazard identification number (RID) : 20

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
Octafluoropropane is not on the REACH Candidate List
Octafluoropropane is not on the REACH Annex XIV List

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Press. Gas (Liq.)</th>
<th>Gases under pressure : Liquefied gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated.</td>
</tr>
</tbody>
</table>

F2 template (no freezing point)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.