

## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

#### 1.1. Product identifier

Acota HFE7000 Engineered Fluid

REACH registration number	CASRN	EC Number	Ingredient Name
01-0000020246-76-0000	375-03-1	ELINCS 484-450-7	Methyl perfluoropropyl ether

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

##### Identified uses

For industrial use only. Not intended for use as a medical device or drug.

#### 1.3. Details of the supplier of the substance or mixture

**Address:** Acota Limited, Centrepoint, Knights Way, Shrewsbury SY1 3BF. UK

**E Mail:** sales@acota.co.uk

**Website:** www.acota.co.uk

#### 1.4. Emergency telephone number

+44 (0)1743 466200

### SECTION 2: Hazard identification

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

**CLP REGULATION (EC) No 1272/2008**

##### CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

**2.2. Label elements**

**CLP REGULATION (EC) No 1272/2008**

Not applicable

**Ingredients:**

Ingredient	CAS Nbr	EC No.	% by Wt
Methyl perfluoropropyl ether	375-03-1	484-450-7	> 99.5

**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Methyl perfluoropropyl ether	375-03-1	ELINCS 484-4507		> 99.5	Substance with a Community level exposure limit in the workplace

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Inhalation**

Remove person to fresh air. If you are concerned, get medical advice.

**Skin contact**

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

**Eye contact**

Flush with large amounts 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 11.1 Information on toxicological effects

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

## SECTION 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 rise to thermal decomposition.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

### 5.3. Advice for fire-fighters

When fire fighting 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, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice.

### 6.2. Environmental precautions

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

### 6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Collect the resulting residue containing solution. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Contents may be under pressure, open carefully. Avoid inhalation of thermal decomposition products. For industrial or professional use only. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

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

Store in a well-ventilated place. Store at temperatures not exceeding 38C/100F Store away from acids. Store away from strong bases. Store away from oxidising agents.

**7.3. Specific end use(s)**

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Methyl perfluoropropyl ether	375-03-1	Manufacturer	TWA:250 ppm determined	

UK HSC : UK Health and Safety Commission  
TWA: Time-Weighted-Average  
STEL: Short Term Exposure Limit  
CEIL: Ceiling

**Biological limit values**

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

**8.2. Exposure controls**

**8.2.1. Engineering controls**

Provide appropriate local exhaust ventilation on open containers. Provide appropriate local exhaust when product is heated. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended: Safety glasses with side shields.

*Applicable Norms/Standards*

Use eye protection conforming to EN 166

**Skin/hand protection**

No chemical protective gloves are required.

**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.

**SECTION 9: Physical and chemical properties**

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

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Liquid.
<b>Appearance/Odour</b>	Colourless liquid with slight ether odour
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Boiling point/boiling range</b>	34 °C
<b>Melting point</b>	-122.5 °C
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Explosive properties</b>	Not classified
<b>Oxidising properties</b>	Not classified
<b>Flash point</b>	No flash point
<b>Autoignition temperature</b>	415 °C
<b>Flammable Limits(LEL)</b>	None detected
<b>Flammable Limits(UEL)</b>	None detected
<b>Vapour pressure</b>	53,728.8 Pa [ @ 20 °C ]
<b>Relative density</b>	1.41 [Ref Std: WATER=1]
<b>Water solubility</b>	Negligible
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Evaporation rate</b>	<i>No data available.</i>
<b>Vapour density</b>	0.51 [ @ 25 °C ]
<b>Decomposition temperature</b>	<i>Not applicable.</i>
<b>Viscosity</b>	0.00047 Pa-s
<b>Density</b>	1.41 g/ml

**9.2. Other information**

<b>EU Volatile Organic Compounds</b>	1,410 g/l
<b>Molecular weight</b>	<i>No data available.</i>
<b>Percent volatile</b>	100 %

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

**10.2 Chemical stability**

Stable.

**10.3 Possibility of hazardous reactions**

Hazardous polymerisation will not occur.

**10.4 Conditions to avoid**

None known.

**10.5 Incompatible materials**

Strong acids.

Strong bases.

Strong oxidising agents.

**10.6 Hazardous decomposition products**

<u>Substance</u>	<u>Condition</u>
Carbonyl fluoride.	At elevated temperatures. - extreme conditions of heat
Hydrogen Fluoride	At elevated temperatures. - extreme conditions of heat
Toxic vapour, gas, particulate.	At elevated temperatures. - extreme conditions of heat

Refer to section 5.2 for hazardous decomposition products during combustion.

If the product is exposed to extreme conditions of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur. Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

**SECTION 11: Toxicological information**

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from Acota assessments.

**11.1 Information on Toxicological effects**

**Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation**

No known health effects.

**Skin contact**

Contact with the skin during product use is not expected to result in significant irritation.

**Eye contact**

Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion**

No known health effects.

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
Methyl perfluoropropyl ether	Inhalation Vapour (4 hours)	Mouse	LC50 820 mg/l
Methyl perfluoropropyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**



Name	Species	Value
Methyl perfluoropropyl ether	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Methyl perfluoropropyl ether	Rabbit	No significant irritation

**Skin Sensitisation**

Name	Species	Value
Methyl perfluoropropyl ether	Mouse	Not classified

**Respiratory Sensitisation**

For the component/components, either no data is currently available or the data is not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
Methyl perfluoropropyl ether	In Vitro	Not mutagenic

**Carcinogenicity**

For the component/components, either no data is currently available or the data is not sufficient for classification.

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

For the component/components, either no data is currently available or the data is not sufficient for classification.

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

For the component/components, either no data is currently available or the data is not sufficient for classification.

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Methyl perfluoropropyl ether	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 82 mg/l	30 days
Methyl perfluoropropyl ether	Inhalation	blood   liver   heart   endocrine system   hematopoietic system   nervous system   respiratory system	Not classified	Rat	NOAEL 246 mg/l	30 days

**Aspiration Hazard**

For the component/components, either no data is currently available or the data is not sufficient for classification.

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

## SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from Acota assessments.

### 12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Methyl perfluoropropyl ether	375-03-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Methyl perfluoropropyl ether	375-03-1	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Methyl perfluoropropyl ether	375-03-1	Green Algae	Experimental	48 hours	EC50	>100 mg/l

### 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Methyl perfluoropropyl ether	375-03-1	Experimental Photolysis		Photolytic half-life (in air)	7.45 years (t <sub>1/2</sub> )	Other methods
Methyl perfluoropropyl ether	375-03-1	Experimental Biodegradation	28 days	BOD	45 % weight	OECD 301D - Closed bottle test

### 12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Methyl perfluoropropyl ether	375-03-1	Experimental Bioconcentration		Log Kow	3.53	Other methods

### 12.4. Mobility in soil

Please contact manufacturer for more details

### 12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

### 12.6. Other adverse effects

Material	CAS Nbr	Ozone Depletion Potential	Global Warming Potential
methyl perfluoropropyl ether	375-03-1	0	

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility. Combustion products will include HF. Facility must be capable of handling halogenated materials. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of Acota, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC -



2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

**EU waste code (product as sold)**

070103*	Organic halogenated solvents, washing liquids and mother liquors
14 06 02*	Other halogenated solvents and solvent mixtures

**SECTION 14: Transportation information**

Not hazardous for transportation

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact Acota for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

**15.2. Chemical Safety Assessment**

A chemical safety assessment has been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended.

**SECTION 16: Other information****Revision information:**

Section 1: Product name information was modified.  
Section 1: REACH registration number information was modified.  
Section 01: SAP Material Numbers information was added.  
Section 1: Restrictions on use information information was deleted.  
CLP: Ingredient table information was added.  
Section 3: Composition/ Information of ingredients table information was added.  
Section 3: Composition/ Information of ingredients table information was deleted.  
Section 6: Accidental release personal information information was modified.  
Section 7: Precautions safe handling information information was modified.  
Section 9: Vapour density value information was modified.  
Section 11: Skin Sensitization Table information was modified.  
Section 11: Target Organs - Repeated Table information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Prints No Data if Adverse effects information is not present information was deleted.  
Section 13: Standard Phrase Category Waste GHS information was modified.  
Section 15: Chemical Safety Assessment information was modified.  
Section 15: Regulations - Inventories information was modified.



Specialty material solutions

## **HFE 7000 Engineered Fluid**

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