

## 1: Identification of substance / mixture

## 1. Product Identifier

Substance

Product Name **Methyl trifluoroacetate**  
 Product Code 001026  
 CAS Number 431-47-0  
 Other Names Trifluoroacetic acid methyl ester  
 IUPAC  
 MFCD Number MFCD00000417  
 EC/EINECS 207-074-5  
 REACH Number

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

Research and Development

## 3. Details of the supplier of the safety data sheet

Fluorochem Ltd  
 Unit 14, Graphite Way  
 Hadfield  
 Derbyshire  
 SK13 1QH  
 United Kingdom

Telephone: +44(0)1457 860111  
 Fax number: +44(0)1457 892799  
 Email: MSDS@fluorochem.co.uk



## 4. Emergency telephone number

07855 268577

## 2. Hazards Identification

## 1. Classification of the substance or mixture

H225	Flam Liq. 2	R10, R11
H314	Skin Corr. 1B	R34

\* The risk codes have been generated using Annex VII of directive 67/548/EEC. Risk code combinations are not included.

## 2. Label elements

Signal Word **Danger**

## Hazard Statements

H225	Highly flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.

## Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## 3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

### 3. Composition / Information on Ingredients

#### 1. Substances

Methyl trifluoroacetate

Assay:100% CAS Number :431-47-0

#### 2. Mixtures

Not Relevant

### 4. First Aid Measures

#### 1. Description of first aid measures

<i>Skin Contact</i>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
<i>Eye Contact</i>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<i>Ingestion</i>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
<i>Inhalation</i>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

#### 2. Most important symptoms and effects

There may be irritation and redness.  
Severe burns may occur.

#### 3. Indication of any immediate medical attention

No additional measures required

### 5. Firefighting measures

#### 1. Extinguishing Media

<i>Suitable</i>	In case of fire: Use sand, CO2 or extinguishing powder
<i>Unsuitable</i>	Do not use water.

#### 2. Special Hazards arising from the substance or mixture

In combustion toxic fumes may form.

#### 3. Advice for Fire Fighters

Wear self-contained breathing apparatus.  
Wear protective clothing to prevent contact with skin and eyes.

### 6. Accidental Release Measures

#### 1. Personal Precautions

Do not attempt to take action without suitable protective clothing – see section 8 of SDS.  
If outside keep bystanders upwind and away from danger point.  
Eliminate all sources of ignition.  
Evacuate the area immediately.

#### 2. Environmental Precautions

Do not discharge into drains or rivers.  
Contain the spillage using bunding.  
Alert the neighbourhood to the presence of fumes or gas.

#### 3. Methods & Materials

Mix with sand or vermiculite.  
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

## 7. Handling and Storage

### 1. Personal Precautions

<i>Safe Handling</i>	Ensure there is sufficient ventilation of the area. Ground/bond container and receiving equipment.
<i>Protection against explosions and fires</i>	Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting/. Use only non-sparking tools. Wash contaminated clothing before reuse. Wash handsougly after handling.

### 2. Conditions for safe storage, including any incompatibilities

<i>Managing Storage Risks</i>	Store in cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed. Keep cold.
<i>Storage Controls</i>	Store in a well-ventilated place. Keep cool.
<i>Maintaining Integrity</i>	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep cool. Store away from oxidising agents
<i>Other advice</i>	no further information available

### 3. Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

## 8. Exposure Controls/Personal Protection

### 1. Control Parameters

No Data Available

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Revision: 1.00  
Modified: 29/06/2011

## 2.Exposure Controls

<i>General protective and hygiene measures</i>	Wear protective gloves/protective clothing/eye protection/face protection. . Wash hands during breaks and at the end of handling the material Immediately remove any contaminated clothing
<i>Engineering measures</i>	Ensure there is sufficient ventilation of the area.
<i>Eye / Face Protection</i>	Safety Glasses with side-shields.
<i>Hand protection</i>	Appropriate protective gloves.
<i>Respiratory protection</i>	Do not breathe dust/fume/gas/mist/vapours/spray. . Use breathing protection with high concentrations
<i>Skin protection</i>	Handle with appropriate gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry hands. Protective clothing.
<i>Other personal protection advice</i>	no data

## 9.Physical and Chemical Properties

### 1. Physical and Chemical Properties

Appearance	Clear colourless liquid
Odour	N/A
Odour threshold	N/A
PH	N/A
Melting point / Freezing point	-78°C
Initial boiling point and boiling range	43-44°C
Flash point	-18°C
Evaporation rate	N/A
Flammability(solid,gas)	N/A
Upper/lower flammability or explosive limits	N/A
Vapour pressure	N/A
Vapour density	N/A
Relative density	1.283
Solubility(ies):	N/A
Partition coefficient: n-octanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A
Explosive properties	N/A
Oxidising properties	N/A

### 2.Other Information

Moisture sensitive

## 10.Stability and Reactivity

**1.Reactivity**

no unusual reactivity

**2.Stability**

Stable under normal conditions.

**3.Possibility of Hazardous Reactions**

no hazardous reactions known

**4.Conditions to Avoid**

no specific conditions to avoid

**5.Incompatible Materials**

Bases.  
Oxidising agents.  
Strong acids.

**6.Hazardous Decomposition Products**

In combustion emits toxic fumes.  
In combustion emits toxic fumes of carbon dioxide / carbon monoxide.  
In combustion emits toxic fumes of hydrogen fluoride.

**11.Toxicology information****1.Information**

<i>Acute Toxicity</i>	no data
<i>Skin corrosion/irritation</i>	strong corrosive effect on skin and mucous membranes
<i>Serious eye Damage/irritation</i>	strong caustic effect.
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	not known
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	not known

**2.Additional**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC,NTP,OSHA or ACGIH  
swallowing will lead to a strong caustic effect on mouth and throat and the danger of perforation of oesophagus and stomach.

**12.Ecological Information****1.Toxicity**

not known

## 2.Persistence and degradability

not known

## 3.Bio-Accumulative Potential

not known

## 4.Mobility and Soil

not known

## 5.Results of PBT & vPvB assessment

not known

## 6.Other adverse effects

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

## 13.Exposure Controls/Personal Protection

### 1.Waste Treatment Methods

*Disposal Operations*

*Disposal of Packaging*      Disposal must be made according to official regulations.

## 14. Transport Information

### Air (ICAO)

1.                                      **UN Number:** 2924
2.                                      **UN proper shipping name:** Flammable liquid, corrosive, n.o.s. «
3.                                      **Transport hazard class(es):** Class: 3      Sub Class : 8



4.                                      **Packing group:** II
5.                                      **Environmental hazards:**
6.                                      **Special Precautions for user:**
7.                                      **Transport in bulk:**

### Road (ADR)

1.                                      **UN Number:** 2924
2.                                      **UN proper shipping name:** FLAMMABLE LIQUID, CORROSIVE, N.O.S.
3.                                      **Transport hazard class(es):** Class: 3      Sub Class :



4.                                      **Packing group:** II
5.                                      **Environmental hazards:**
6.                                      **Special Precautions for user:**
7.                                      **Transport in bulk:**

### Sea (IMDG)

1.                                      **UN Number:** 2924

# Safety Data Sheet

Revision: 1.00  
Modified: 29/06/2011

2. **UN proper shipping name:** Flammable liquid, corrosive, n.o.s. «

3. **Transport hazard class(es):** Class: 3 Sub Class : 8



4. **Packing group:** II

5. **Environmental hazards:**

6. **Special Precautions for user:** This entry shall not be used for PENTACHLOROPHENOL, UN 3155.

7. **Transport in bulk:** IBCINS: IBC02

UNTANKINS: T11  
TANKPROV: TP2 TP27

## 15. Safety, health and environmental regulations

### 1. Safety, health and environmental regulations:

product is not subject to any additional regulations or provisions

### 2. Safety Assessment

No Chemical Safety Assessment

## 16. Other Information

### 1. Other Information:

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by road)

RID: Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the ICAO

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service

### 2. Associated risk phrases according to european directive 67/548/EEC

R10	Flammable
R11	Highly flammable
R34	Causes burns

### 3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.