SAFETY DATA SHEET
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

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

1.1. Product identifier
Product name 1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate
Product number FF60379
Synonyms; trade names 1-Fluoro-2,4,6-trimethylpyridinium triflate
CAS number 107264-00-6
EC number 672-581-4

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Laboratory reagent. Manufacture of substances. Research and development.

1.3. Details of the supplier of the safety data sheet
Supplier Carbosynth Ltd
8&9 Old Station Business Park
Compton
Berkshire
RG20 6NE
UK
+44 1635 578444
+44 1635 579444
info@carbosynth.com

1.4. Emergency telephone number
Emergency telephone +44 7887 998634

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards Not Classified
Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318
Environmental hazards Not Classified

2.2. Label elements
EC number 672-581-4

Pictogram

Signal word Danger
Hazard statements H314 Causes severe skin burns and eye damage.
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

Precautionary statements

P260 Do not breathe vapour/ spray.
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Product name</th>
<th>1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number</td>
<td>107264-00-6</td>
</tr>
<tr>
<td>EC number</td>
<td>672-581-4</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>C₉H₁₁F₄NO₃S</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

**General information**
Get medical advice/attention if you feel unwell.

**Inhalation**
Remove person to fresh air and keep comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if symptoms are severe or persist.

**Ingestion**
Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if symptoms are severe or persist.

**Skin contact**
Remove contaminated clothing. Rinse with water. Continue to rinse for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if symptoms are severe or persist.

**Eye contact**
Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

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

**General information**
See Section 11 for additional information on health hazards.

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

**Notes for the doctor**
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

**Suitable extinguishing media**
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

**Specific hazards**
None known.

**Hazardous combustion products**
Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen. Oxides of sulphur. Hydrogen fluoride (HF).
5.3. Advice for firefighters

**Special protective equipment for firefighters**

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Use protective equipment appropriate for surrounding materials.

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**SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions**

Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of dust and vapours. Provide adequate ventilation. Keep unnecessary and unprotected personnel away from the spillage.

6.2. Environmental precautions

Environmental precautions: Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

**Methods for cleaning up**

Wear protective clothing as described in Section 8 of this safety data sheet. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Clear up spills immediately and dispose of waste safely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections: For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

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**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

**Usage precautions**

Wear protective clothing as described in Section 8 of this safety data sheet. Wash hands thoroughly after handling. Provide adequate ventilation. Avoid generation and spreading of dust. Avoid contact with skin and eyes. Avoid inhalation of dust and vapours.

7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions**

Keep container tightly closed. Store in a cool and well-ventilated place. Store away from incompatible materials (see Section 10). Store contents under inert gas. Handle under inert gas. Protect from moisture. Protect from light. Store at room temperature.

7.3. Specific end use(s)

**Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

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

8.1. Control parameters

**Occupational exposure limits**

No exposure limits known for ingredient(s).

8.2. Exposure controls

**Appropriate engineering controls**

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

Eye/face protection
Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection
Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Particulate filters should comply with European Standard EN143. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls
Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

**Appearance**
Solid.

**Odour**
No data available.

**Odour threshold**
No data available.

**pH**
No data available.

**Melting point**
165°C

**Initial boiling point and range**
No data available.

**Flash point**
No data available.

**Evaporation rate**
No data available.

**Flammability (solid, gas)**
No data available.

**Upper/lower flammability or explosive limits**
No data available.

**Vapour pressure**
No data available.

**Vapour density**
No data available.

**Relative density**
No data available.

**Solubility(ies)**
No data available.

**Partition coefficient**
No data available.

**Auto-ignition temperature**
No data available.

**Decomposition Temperature**
No data available.

**Viscosity**
No data available.

**Explosive properties**
No data available.

**Oxidising properties**
No data available.
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

Molecular weight 289.25

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity No data available.

10.2. Chemical stability
Stability Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions No data available.

10.4. Conditions to avoid
Conditions to avoid Avoid heat. Protect from moisture.

10.5. Incompatible materials
Materials to avoid Oxidising agents. Alkalis. Some metals.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity - oral Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation Animal data Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation
Serious eye damage/irritation Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation
Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation
Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity
Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

Reproductive toxicity - fertility Based on available data the classification criteria are not met.
Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.
Specific target organ toxicity - repeated exposure
STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the
length of exposure.

Inhalation Corrosive to the respiratory tract. Symptoms following overexposure may include the
following: Severe irritation of nose and throat.

Ingestion May cause chemical burns in mouth, oesophagus and stomach. Symptoms following
overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Skin contact Causes severe burns. Symptoms following overexposure may include the following: Pain or
irritation. Redness. Blistering may occur.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following:
Pain. Profuse watering of the eyes. Redness.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have
hazardous effects on the environment.

12.1. Toxicity
Toxicity Based on available data the classification criteria are not met.

12.2. Persistence and degradability
Persistency and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential
Bioaccumulative potential No data available on bioaccumulation.
Partition coefficient No data available.

12.4. Mobility in soil
Mobility No data available.

12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment No data available.

12.6. Other adverse effects
Other adverse effects None known.
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

SECTION 13: Disposal considerations

13.1. Waste treatment methods

<table>
<thead>
<tr>
<th>General information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 14: Transport information

14.1. UN number

| UN No. (ADR/RID) | 3261 |
| UN No. (IMDG)    | 3261 |
| UN No. (ICAO)    | 3261 |
| UN No. (ADN)     | 3261 |

14.2. UN proper shipping name

| Proper shipping name (ADR/RID) | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| Proper shipping name (IMDG)    | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| Proper shipping name (ICAO)    | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| Proper shipping name (ADN)     | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |

14.3. Transport hazard class(es)

| ADR/RID class        | 8 |
| ADR/RID classification code | C4 |
| ADR/RID label        | 8 |
| IMDG class           | 8 |
| ICAO class/division  | 8 |
| ADN class            | 8 |

Transport labels

14.4. Packing group

| ADR/RID packing group | II |
| IMDG packing group    | II |
| ADN packing group     | II |
| ICAO packing group    | II |

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

IMDG Code segregation group 1. Acids
EmS F-A, S-B
ADR transport category 2
Emergency Action Code 2X
Hazard Identification Number (ADR/RID) 80
Tunnel restriction code (E)

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

SECTION 15: Regulatory information

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

National regulations
Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

EU legislation

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
L50: Lethal Concentration to 50% of a test population.
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC50: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Training advice
Only trained personnel should use this material.

Revision date 23/03/2018
Revision 1
SDS number 144926
1-Fluoro-2,4,6-trimethylpyridinium trifluoromethanesulfonate

Hazard statements in full
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.