SAFETY DATA SHEET
Edoxaban tosylate

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

1.1. Product identifier
Product name: Edoxaban tosylate
Product number: FE65015
CAS number: 480449-71-6

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: Acute Tox. 4 - H302
Environmental hazards: Not Classified

2.2. Label elements
Pictogram
![Warning]

Signal word: Warning

Hazard statements: H302 Harmful if swallowed.
Precautionary statements: P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P330 Rinse mouth. P501 Dispose of contents/ container in accordance with national regulations.
Edoxaban tosylate

2.3. Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Product name</th>
<th>Edoxaban tosylate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number</td>
<td>480449-71-6</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>C₂₄H₃₀ClN₇O₄S·C₇H₈O₃S</td>
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</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
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 chloride (HCl).

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Edoxaban tosylate

**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.

**8.2. 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. For waste disposal, see Section 13.

**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 at temperatures between 2°C and 8°C.

**7.3. Specific end use(s)**
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

**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.

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.
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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.

Colour

White. to Off-white.

Odour

No data available.

Odour threshold

No data available.

pH

No data available.

Melting point

No data available.

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)

Soluble in the following materials: DMSO

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.

9.2. Other Information

Molecular weight

720.26

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

No data available.

10.2. Chemical stability
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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

No data available.

10.5. Incompatible materials

Materials to avoid

Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products


SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 903.0

Species  Rat

Notes (oral LD₅₀) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 500.0

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 Based on available data the classification criteria are not met.

Serious eye damage/irritation

Based on available data the classification criteria are not met.

Respiratory sensitisation

Based on available data the classification criteria are not met.

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 None of the ingredients are listed or exempt.

Reproductive toxicity

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

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
Aspiration hazard Not relevant. Solid.

General information
Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Ingestion
May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

Skin contact
Prolonged contact may cause dryness of the skin.

Eye contact
Dust may cause slight irritation.

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
Persistence 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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
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**General information**
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.

**Disposal methods**
Mix or dissolve the material in a combustible solvent and burn in chemical incinerator equipped with an afterburner and scrubber.

### SECTION 14: Transport information

**General**
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

**14.1. UN number**
Not applicable.

**14.2. UN proper shipping name**
Not applicable.

**14.3. Transport hazard class(es)**
No transport warning sign required.

**14.4. Packing group**
Not applicable.

**14.5. Environmental hazards**
Environmentally hazardous substance/marine pollutant
No.

**14.6. Special precautions for user**
Not applicable.

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code**
Transport in bulk according to Not applicable.
Annex II of MARPOL 73/78
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.
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### 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.
- 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.
- CAS: Chemical Abstracts Service.
- ATE: Acute Toxicity Estimate.
- LC₅₀: 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**

16/06/2017

**Revision**

2

**Supersedes date**

26/05/2017

**SDS number**

144926

**Hazard statements in full**

H302 Harmful if swallowed.

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This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company’s knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user’s responsibility to satisfy himself as to the suitability of such information for his own particular use.