

FK506 (Tacrolimus) SDS | MSDS

1.PRODUCT AND COMPANY IDENTIFICATION

Product identifier

- **Product Name:** FK506 (Tacrolimus)
- **Catalog Number:** S5003
- **CAS Number:** 104987-11-3
- **IUPAC Name:** (3S,4R,5S,8R,9E...5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propen-1-yl)-15,19-epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone

Relevant identified uses and uses advised against

- **Identified uses:** For research and development use only; laboratory chemicals; manufacture of substances.
- **Uses advised against:** Not for pharmaceutical, household, or other unapproved uses.

Details of the supplier

- **Company :** Selleck Chemicals
- **TollFree :** +1 877 796-6397
- **Tel :** +1 832 582-8158
- **Fax :** +1 832 582-8590

Emergency telephone number

- **Emergency phone #:** +1 832 582-8158

2. HAZARDS IDENTIFICATION

Pictogram:



GHS Classification:

Acute toxicity, Oral (Category 3)

Signal Word: Danger

Hazard Statements:

H301: Toxic if swallowed.

Precautionary Statements:

- **Prevention:** P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product.
- **Response:** P301 + P310 + P330: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
- **Storage:** P405: Store locked up.
- **Disposal:** P501: Dispose of contents/container to an approved waste disposal plant.

Other Hazards: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Substance

Chemical Name: (3S,4R,5S,8R,9E...5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propen-1-yl)-15,19-epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone

CAS-No.: 109581-93-3

Concentration: >= 90 - <= 100%

4. FIRST AID MEASURES

General Advice: Show this safety data sheet to the attending physician.

If Inhaled: Move person to fresh air.

In Case of Skin Contact: Take off contaminated clothing immediately. Rinse skin with water or shower.

In Case of Eye Contact: Rinse thoroughly with plenty of water. Remove contact lenses.

If Swallowed: Give the victim no more than two glasses of water. Seek immediate medical advice. In exceptional cases where medical care is unavailable within one hour, induce vomiting (only in conscious persons), administer activated charcoal (20-40 g in a 10% slurry), and consult a physician promptly.

Most Important Symptoms/Effects: The most important known symptoms and effects are described in the labeling (Section 2) and/or Section 11.

Protection of First-Aiders: Refer to Section 8 for personal protection.

Notes to Physician: N/A.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water, Foam, Carbon dioxide (CO₂), Dry powder.

Unsuitable Extinguishing Media: No limitations of extinguishing agents are given for this substance.

Specific Hazards: Combustible. Hazardous combustion gases or vapors (Carbon oxides, Nitrogen oxides) may develop in the event of fire.

Hazardous Combustion Products: Carbon oxides, Nitrogen oxides (NO_x).

Specific Extinguishing Methods: N/A.

Further Information: Use water spray jet to suppress gases/vapors/mists. Prevent fire extinguishing water from entering surface water or groundwater systems.

Special Protective Equipment: Wear self-contained breathing apparatus and suitable protective clothing. Maintain a safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Avoid inhalation of powder. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area and consult an expert. For personal protection, see Section 8.

Environmental Precautions: Do not allow product to enter drains.

Methods and Materials for Containment and Cleaning Up: Cover drains. Collect, bind, and pump off spills. Take up carefully and dispose of properly. Clean the affected area. Avoid the generation of powder.

7. HANDLING AND STORAGE

Precautions for Safe Handling: For precautions, see Section 2.2.

Conditions for Safe Storage: Keep container tightly closed in a dry and well-ventilated place. Keep locked up or in an area accessible only to authorized persons.

Storage Class: 6.1C, Combustible, acute toxic Cat.3 / toxic compounds or compounds causing chronic effects.

Recommended Storage Temperature: See product label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Control Parameters: Contains no substances with occupational exposure limit values.

Engineering Measures: N/A.

Personal Protective Equipment:

- **Respiratory Protection:** Required when powder is generated. Recommended filter type: P3 (based on DIN EN 143, DIN 14387).
- **Hand Protection:** Nitrile rubber gloves (Full and splash contact). Breakthrough time: 480 min; Glove thickness: 0.11 mm (e.g., KCL 741 Dermatrill L).
- **Eye Protection:** Safety glasses approved under NIOSH (US) or EN 166 (EU).
- **Skin and Body Protection:** Protective clothing.
- **Hygiene Measures:** Change contaminated clothing. Wash hands after working with the substance. Preventive skin protection is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: powder

Color: N/A

Odor: N/A

Odor Threshold: N/A

pH: N/A

Melting Point: N/A

Boiling Point: N/A

Flash Point: N/A

Evaporation Rate: N/A

Flammability (solid, gas): N/A

Vapor Pressure: N/A

Relative Vapor Density: N/A

Relative Density: N/A

Density: N/A

Water Solubility: N/A

Partition Coefficient (n-octanol/water): N/A

Autoignition Temperature: N/A

Decomposition Temperature: N/A

Viscosity: N/A

Explosive Properties: N/A

Oxidizing Properties: N/A

Molecular Weight: 822.03 g/mol

10. STABILITY AND REACTIVITY

Reactivity: Flammable organic substances in fine distribution may have powder explosion potential when whirled up.

Chemical Stability: Chemically stable under standard ambient conditions (room temperature).

Possibility of Hazardous Reactions: N/A.

Conditions to Avoid: No information available.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: In the event of fire, see Section 5.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

- LD50 Oral - Rat - 134 mg/kg
- Inhalation: N/A
- Dermal: N/A

Skin Corrosion/Irritation: N/A.

Serious Eye Damage/Eye Irritation: N/A.

Respiratory or Skin Sensitization: N/A.

Germ Cell Mutagenicity: N/A.

Carcinogenicity:

- IARC: No component present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen.
- NTP: No component present at levels $\geq 0.1\%$ is identified as a known or anticipated carcinogen.
- OSHA: No component present at levels $\geq 0.1\%$ is on OSHA's list of regulated carcinogens.

Reproductive Toxicity: N/A.

STOT - Single Exposure: N/A.

STOT - Repeated Exposure: N/A.

Aspiration Hazard: N/A.

Additional Information: Stomach - Irregularities - Based on Human Evidence. The chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Ecotoxicity: N/A for FK-506 monohydrate regarding toxicity to fish.

Persistence and Degradability: N/A.

Bioaccumulative Potential: N/A.

Mobility in Soil: N/A.

Other Adverse Effects: N/A.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers. Do not mix with other waste. Handle uncleaned containers as the product itself.

14. TRANSPORT INFORMATION

International Regulations (IATA-DGR):

- **UN/ID No.:** UN 2811
- **Proper Shipping Name:** Toxic powder, organic, n.o.s. (FK-506 monohydrate)
- **Class:** 6.1
- **Packing Group:** III
- **Labels:** Division 6.1 - Toxic substances

International Regulations (IMDG-Code):

- **UN Number:** UN 2811
- **Proper Shipping Name:** TOXIC POWDER, ORGANIC, N.O.S. (FK-506 monohydrate)
- **Class:** 6.1
- **Packing Group:** III
- **Labels:** 6.1
- **Marine Pollutant:** No

National Regulations (49 CFR Road):

- **UN/ID/NA Number:** UN 2811
- **Proper Shipping Name:** Toxic powders, organic, n.o.s. (FK-506 monohydrate)
- **Class:** 6.1
- **Packing Group:** III
- **Labels:** Division 6.1 - Toxic substances
- **Marine Pollutant:** No

15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 : Acute Health Hazard

Hazards Chronic Health Hazard

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The components of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

16. OTHER INFORMATION

Revision Date: 2026/07/13

Further Information: The information provided is believed to be correct but is not exhaustive and should be used only as a guideline based on current knowledge. It does not represent a guarantee of the properties of the product. Selleck Chemicals Corporation and its Affiliates shall not be held liable for any damage resulting from handling or contact with the product.