

# Safety Data Sheet

## SAFETY DATA SHEET - LC LABORATORIES REVISION DATE: JULY 1, 2019

### SECTION 1. IDENTIFICATION:

Trade name: FK-506  
Product Number: [F-4900](#)  
Manufacturer/Supplier:  
LC Laboratories  
165 New Boston Street  
Woburn, MA 01801 USA  
+1-781-937-0777 Fax: +1-781-938-5420

---

### SECTION 2. HAZARD(S) IDENTIFICATION:

Hazard Description: Toxic; immunosuppressant  
Substance Class Identifier: Drug; Natural Product; Human Data; Reproductive Effector  
Toxic if swallowed  
May be harmful if inhaled or absorbed through the skin  
Ingestion may result in nausea, dyspepsia (heartburn), vomiting, diarrhea, constipation, infection, cardiac damage, hypertension (elevated blood pressure), blurred vision, liver and kidney problems (tacrolimus nephrotoxicity), hyperkalemia (elevated serum sodium levels), hypomagnesemia (decreased serum magnesium levels), hyperglycemia (elevated serum glucose levels), diabetes mellitus, rash/pruritus (itching), lung damage, and various neuropsychiatric problems such as anorexia (decreased appetite), insomnia, posterior reversible encephalopathy syndrome (characterized by headache, confusion, seizures and visual loss), confusion, dizziness, asthenia (muscle weakness), depression, anxiety, cramps, neuropathy, seizures, tremors, and catatonia (abnormality of movement and behavior arising from a disturbed mental)  
Exposure may cause irritation of the skin, eyes, and respiratory tract  
Signal Word: Danger

#### GHS Hazard Statements:

H302+312+332 - Harmful if swallowed, in contact with skin or if inhaled

#### GHS Precautionary Statements:

P2562 - Do not get in eyes, on skin or on clothing

WARNING: For Laboratory Research Use Only



---

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Chemical Name: FK-506

Synonyms: FK-506, FR 900506, Fujimycin, Prograf, Tacrolimus

Hazardous Ingredient: FK-506

CAS Registry Number: 104987-11-3

Molecular Weight: 804.02

Molecular Formula: C<sub>44</sub>H<sub>69</sub>NO<sub>12</sub>

---

#### **SECTION 4. FIRST-AID MEASURES:**

After Inhalation: If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration

After skin contact: flush with copious amounts of water; remove contaminated clothing and shoes; call a physician

After eye contact: check for and remove contact lenses and flush with copious amounts of water; assure adequate flushing by separating the eyelids with fingers; call a physician

After swallowing: if swallowed, wash out mouth with copious amounts of water; call a physician

---

#### **SECTION 5. FIRE-FIGHTING MEASURES:**

Suitable extinguishing agents: water spray, carbon dioxide, dry chemical powder or foam

Protective equipment: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual fire hazard: none known

---

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES:**

Person-related safety precautions: cordon off area of spill; wear self-contained breathing apparatus, protective clothing and heavy rubber gloves

Measures for cleaning/collecting: absorb solutions with finely-powdered liquid-binding material (diatomite, universal binders); decontaminate surfaces and equipment by scrubbing with alcohol; dispose of contaminated material according to Section 13

---

#### **SECTION 7. HANDLING AND STORAGE:**

Information for safe handling: avoid contact with skin, eyes and clothing; material may be an irritant

Storage: store solid and solutions at -20 °C

---

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:**

Personal protective equipment as follows:

Breathing equipment: NIOSH/MSHA-approved respirator

Protection of hands: handle with Nitrile rubber gloves with minimum thickness of 0.11 mm (4.3 mil). This recommendation should not be interpreted as

offering an approval for any specific use conditions. Please review this recommendation with a safety officer to evaluate if it is appropriate for the anticipated use.

Eye protection: chemical safety goggles

---

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:**

Form: crystalline solid; granular or powder

Color: white to off-white

Odor: none

Melting point/Melting range: not available

Danger of explosion: none

Solubility in / Miscibility with water: very poorly soluble in water; maximum solubility in plain water is estimated to be about 10 µM; buffers, serum, or other additives may increase or decrease the aqueous solubility

Solvent content: none

Organic solvents: soluble in DMSO at 100 mg/mL; soluble in ethanol at 100 mg/mL

---

### **SECTION 10. STABILITY AND REACTIVITY:**

Stability: stable if stored as directed; avoid strong oxidizing agents

Thermal decomposition / conditions to be avoided: protect from light and heat

Dangerous products of decomposition: thermal decomposition may produce toxic gases such as carbon monoxide, carbon dioxide, and nitrogen oxides

---

### **SECTION 11. TOXICOLOGICAL INFORMATION:**

RTECS #: KD4200000

Acute toxicity: intraperitoneal toxicity (LD50) >200 mg/kg (mouse);

intraperitoneal toxicity (TDLo): 0.5 mg/kg (rat); oral toxicity (TDLo): 6-10 mg/kg (rat), 0.8-0.88 mg/kg (human), 8 mg/kg (woman); intravenous toxicity (TDLo): 450 µg/kg (rat)

Primary irritant effect:

On the skin: may be an irritant; may be harmful if absorbed through the skin

On the eye: may be an irritant

Inhalation: may cause respiratory tract irritation; may be harmful if inhaled

Ingestion: toxic if swallowed

---

### **SECTION 12. ECOLOGICAL INFORMATION:**

General notes: no data available

Treat as potentially toxic if released into the environment

---

### **SECTION 13. DISPOSAL CONSIDERATIONS:**

Dispose of in accordance with prevailing country, federal, state and local regulations

**SECTION 14. TRANSPORT INFORMATION:**

UN number: 2811

DOT: Toxic solid, organic, n.o.s. (FK-506), Class: 6.1, Packing group: III

IMDG: Toxic solid, organic, n.o.s. (FK-506), Class: 6.1, Packing group: III

IATA: Toxic solid, organic, n.o.s. (FK-506), Class: 6.1, Packing group: III

---

**SECTION 15. REGULATORY INFORMATION:**

Code letter and hazard designation of product:

T: Toxic

EU Risk And Safety phrases:

S22: Do not breathe dust

S24/25: Avoid contact with skin and eyes

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S53: Avoid exposure - obtain special instructions before use

R25: Toxic if swallowed/p>

---

**SECTION 16. OTHER INFORMATION:**

The above information is believed to be correct based on our present knowledge but does not purport to be complete. For research use only by trained personnel. The burden of safe use of this material rests entirely with the user. LC Laboratories disclaims all liability

Reviewed: July 1, 2019