



# OCTAGON CHEMICALS LIMITED

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## Tacrolimus MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Tacrolimus**CAS#:** 104987-11-3**TSCA:** TSCA 8(b) inventory:Tacrolimus**CI#:** Not Available**Synonym:** Tacrolimus powder, 104987-11-3**Chemical Formula:** C<sub>44</sub>H<sub>69</sub>NO<sub>12</sub>**Contact Information:**OCTAGON CHEMICALS  
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### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Tacrolimus	104987-11-3	99%

**Toxicological Data on Ingredients:** Tacrolimus: Rat ORAL (LD50): NA

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of eye contact (irritant), of ingestion. Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator). Inflammation of the eye is characterized by redness, watering, and itching.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not Available MUTAGENIC EFFECTS: Not Available TERATOGENIC EFFECTS: Not Available  
DEVELOPMENTAL TOXICITY: Not Available The substance is toxic to lungs, the nervous system, mucous membranes.  
Repeated or prolonged exposure to the substance can produce target organs damage.

### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention immediately.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Not Available

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not Available

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Non flammable.

**Auto-Ignition Temperature:** Not Available

**Flash Points:** 481°C

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...), sulfur oxides (SO<sub>2</sub>, SO<sub>3</sub>...).

**Fire Hazards in Presence of Various Substances:** Not Available

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not Available

Risks of explosion of the product in presence of static discharge: Not Available

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not Available

**Special Remarks on Explosion Hazards:** Not Available

## Section 6: Accidental Release Measures

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## Section 7: Handling and Storage

**Precautions:**



Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not Available

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** white to off-white powder

**Molecular Weight:** 804.2 g/mol

**Color:** white

**Boiling Point:** 871.7°C

**Melting Point:** NA

**Solubility:** Insoluble in methanol, ethanol.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not Available

**Conditions of Instability:** Not Available

**Incompatibility with various substances:** Not Available

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not Available

**Special Remarks on Corrosivity:** Not Available

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (Rat Oral LD50):NA

**Chronic Effects on Humans:** Causes damage to the following organs: lungs, the nervous system, mucous membranes.

**Other Toxic Effects on Humans:**

Very hazardous in case of Ingestion. Hazardous in case of of inhalation. Slightly hazardous in case of skin contact.

**Special Remarks on Toxicity to Animals:** Not Available

**Special Remarks on Chronic Effects on Humans:** Not Available

**Special Remarks on other Toxic Effects on Humans:** Not Available

## Section 12: Ecological Information

**Eco-toxicity:** Not Available

**BOD5 and COD:** Not Available

**Products of Bio-degradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Bio-degradation:** Not Available.

**Special Remarks on the Products of Biodegradation:** The substance is possibly harmful for the aquatic environment.

## Section 13: Disposal Considerations

**Waste Disposal:**

Dispose of any cleanup materials and waste residue according to applicable laws or regulations.

## Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not available.

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

**Federal and State Regulations:** TSCA 8(b) inventory: Tacrolimus: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):** CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):** R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes.

**HMIS (U.S.A.): Health**

**Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0



**Specific hazard:**0

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16: Other Information

**References:** Not Available

**Other Special Considerations:** Not Available

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