

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>Pretium SDS</b>
<b>Product use / type:</b>	Fungicide
<b>Uses advised against / restrictions:</b>	Refer to product label.
<b>EPA Registration No.:</b>	92311-2-55146
<b>Chemical name / synonym / active ingredient(s):</b>	Natamycin; 6,11,28-trioxatricyclo[22.3.1.0 <sup>5,7</sup> ]octacos-8,14,16,18,20-pentaene-35-carboxylic acid, 22-[(3-amino-3,6-dideoxy-β-D-mannopyranosyl)oxy]-1,3,26-trihydroxy-12-methyl-10-oxo-, (1R,3S,5R,7R,8E,12R,14E,16E,18E,20E,22R,24S,25R,26S)-
<b>Manufacturer / Registrant:</b>	Nufarm Americas Inc. 11901 S. Austin Avenue Alsip, IL 60803
<b>Manufacturer's Telephone:</b>	919-234-6242
<b>Email:</b>	<a href="http://nufarm.com">nufarm.com</a>
<b>Emergency phone number:</b>	1-800-345-3330

**2. HAZARDS IDENTIFICATION**

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

**Classification** Not classified

**EMERGENCY OVERVIEW**

**Appearance:** Off-white

**Physical state:** Liquid

**Odor:** Characteristic

**Other Information / Potential Hazards:**

None known based on supplied information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Chemical Name</b>	<b>CAS No.</b>	<b>Weight %</b>
Natamycin	7681-93-8	13.459
Glycerol	56-81-5	>20 - <30**
Other ingredients	-	**

**\*\*** Exact concentration of components withheld as a trade secret. Values are not product specifications.

**4. FIRST AID MEASURES**

<b>If swallowed:</b>	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>If in Eyes:</b>	Hold eye open and rinse gently with water for 15-30 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>If on skin or clothing:</b>	Remove contaminated clothing and shoes. Rinse skin immediately with plenty of water for 15-30 minutes. Call a poison control center or doctor for treatment advice.
<b>If inhaled:</b>	Move person to fresh air. If person is not breathing, call 911 or get medical help, then give artificial respiration, preferably mouth-to-mouth with the aid of a pocket mask equipped with a one-way valve. Call a poison control center or doctor for treatment advice.
<b>Most important symptoms, both acute and delayed:</b>	Causes temporary eye irritation.
<b>Immediate and any special treatment:</b>	Removal of exposure followed by symptomatic and supportive care. No other information available.

**5. FIRE-FIGHTING MEASURES**

<b>Flammable properties:</b>	Not flammable.
<b>Extinguishing media:</b>	Water fog, dry chemical, foam and carbon dioxide (CO <sub>2</sub> )
<b>Unsuitable extinguishing media:</b>	High pressure water streams.
<b>Specific material hazards</b>	Under fire conditions, may emit irritating vapors, carbon dioxide and carbon monoxide.
<b>Firefighting measures:</b>	Use extinguishing media appropriate for surrounding fire. Prevent contaminated firefighting waters and spillage from entering sewers, drains and waterways.

**Protective equipment and precautions for firefighters:**

Wear full protective firefighting gear including self-contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent).

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Wear protective gloves / clothing and eye protection. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation.

**Environmental precautions:**

Prevent entry into waterways, lakes, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

**Methods for containment:**

Dike to contain spill with inert material (e.g. sand, silica gel, or binder).

**Methods for cleanup:**

Soak up with inert absorbent. Pick up and transfer to properly labeled containers for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling:**

Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product.

**Condition for safe storage:**

Store and handle in accordance with good industrial hygiene practices. Keep container tightly closed. Store in a cool and well-ventilated place. Store in original labeled container. Store away from direct sunlight between 40°F and 90°F.

**Incompatible storage situations:**

Separate pesticides during storage to prevent cross-contamination of other pesticides, fertilizers, food, and feed.

**8. EXPOSURE CONTROL / PERSONAL PROTECTION****Exposure Guidelines:**

The following recommendations for exposure controls are intended for the manufacture, formulation and packaging of this material. Commercial applicators and/or on-farm applications should refer to the product label for personal protection equipment.

**Workplace Control Parameters:**

Glycerol (56-81-5)

**Exposure Guidelines**

TWA 5 mg/m<sup>3</sup> OEL mists, respirable (OSHA) Table Z-1

TWA 15 mg/m<sup>3</sup> OEL Air Contaminant Limit (OSHA) Table Z-1

TLV - TWA 10 mg/m<sup>3</sup> (ACGIH)

	PEL 10 mg/m <sup>3</sup> California permissible exposure limits for chemical contaminants (Title 8, Article 107)
<b>Engineering controls:</b>	Emergency eye wash. Ensure adequate ventilation or provide local exhaust.
<b>Personal protective equipment:</b>	Follow personal protective equipment manufacturers recommendations for use, cleaning and maintenance.
<b>Eye / face protection:</b>	Safety glasses with side-shields.
<b>Body / skin protection:</b>	Long sleeved shirt, long pants, shoes plus socks. Wash work clothing before reuse.
<b>Hand protection:</b>	Waterproof gloves / hand protection.
<b>Respiratory protection:</b>	If handling without sufficient ventilation or excess airborne exposure, wear a dust / mist filtering respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Appearance:</b>	Off-white
<b>Odor:</b>	Characteristic
<b>pH:</b>	8.05
<b>Melting / freezing point:</b>	No information available
<b>Boiling point</b>	No information available
<b>Flash point:</b>	> 200.6° F / 93.7° C
<b>Explosive properties:</b>	No information available
<b>Autoignition temperature:</b>	No information available
<b>Vapor pressure:</b>	No information available
<b>Oxidizing properties:</b>	No information available
<b>Relative density:</b>	1.1145 g/cm <sup>3</sup>
<b>Solubility:</b>	Miscible
<b>Viscosity:</b>	130 cSt at 25° C

## 10. STABILITY AND REACTIVITY

<b>Reactivity / chemical stability:</b>	Stable under normal temperature and conditions.
<b>Possibility of hazardous reactions:</b>	Not expected under normal conditions of handling and use.
<b>Conditions to avoid:</b>	No information available.
<b>Incompatible materials:</b>	Strong oxidizing agents.
<b>Hazardous decomposition products:</b>	No information available.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure:**

Inhalation	May be harmful if inhaled.
Eye contact	Causes minimal but temporary eye irritation.
Skin contact	Slightly irritating.
Ingestion	May be harmful if swallowed.

**Product numerical measures of toxicology:**

Acute oral LD <sub>50</sub> :	Rat >5000 mg/kg
Acute dermal LD <sub>50</sub> :	No information available.
Acute inhalation LC <sub>50</sub> :	Rat >2.23 mg/L
Eye irritation:	Slight irritation.
Skin irritation:	Slight irritation.
Sensitization:	Not a sensitizer (mice).

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Component information:**

Natamycin (7681-93-8)

Acute oral LD <sub>50</sub> :	Rat >5000 mg/kg
Sensitization (experience with human exposure):	No information available.
Mutagenic effects:	No information available.
Carcinogenicity:	Not listed on NTP, IARC or OSHA lists.
Reproductive / Developmental effects:	No information available.

**12. ECOLOGICAL INFORMATION**

Environmental Hazards:	Keep out of any body of water.
Ecotoxicity: Natamycin (7681-93-8)	LDC <sub>50</sub> : >2000 mg/kg bw <i>Avain spp.</i>
Persistence and degradability:	No information available.
Bioaccumulation:	No information available.
Mobility:	No information available.

**13. DISPOSAL CONSIDERATIONS**

- Product disposal:** Wastes resulting from the use of this product must be disposed in accordance with applicable Federal, State or local regulations. Keep out of drains, sewers, ditches and water ways.
- Container disposal:** Refer to product label for container disposal. Do not reuse containers.

**14. TRANSPORT INFORMATION**

- U.S. DOT:** Not regulated

**15. REGULATORY INFORMATION****U.S. Federal Regulations:**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION. Harmful if swallowed, absorbed through skin, or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

- TSCA:** TSCA exempt; regulated under FIFRA.
- SARA 311/312:** Refer to section 2 for GHS hazards.
- SARA 313:** No substances listed.
- CERCLA:** No substances listed.

**U.S. State Regulations:**

**State Right-to-Know Regulations:** Pennsylvania Right-to-know; Water (7732-18-5): Glycerol (56-81-5).

**16. OTHER INFORMATION**

<b><u>NFPA Ratings:</u></b>	<b>Health</b>	<b>Fire</b>	<b>Instability</b>
	1	0	0

**National Fire Protection Association (NFPA) Hazard Rating:**

**Rating for this product: Health: 3    Flammability: 1    Reactivity: 0**

Hazards Scale: 0 = Minimal    1 = Slight    2 = Moderate    3 = Serious    4 = Severe

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

**Key / Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

CAS - Chemical Abstracts Service

C – Centigrade

cSt - Centistokes

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

DOT - Department of Transportation

F – Fahrenheit

FIFRA – Federal Insecticide Fungicide and Rodenticide Act

GHS – Global Harmonized System

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IMDG - International Maritime Dangerous Goods

LC / LD – Lethal Concentration / Lethal Dose

NFPA - National Fire Protection Association NTP -

National Toxicology Program

OEL – Occupational Exposure Limit

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

RCRA - Resource Conservation and Recovery Act

SARA - Superfund Amendments and Reauthorization Act

TLV – Threshold Limit Value

TSCA - Toxic Substances Control Act

TWA – Time Weighted Average