MATERIAL SAFETY DATA SHEET

NSC 630176

Developmental Therapeutics Program, DCT
National Cancer Institute
Executive Plaza North, Room 831
6130 Executive Boulevard
Rockville, Maryland 20852

Revision Date: February 8, 1993

SECTION I. MATERIAL IDENTIFICATION

Chemical Name: (E)-(1S,4S,10S,21R)-7-[(Z)-ethylidene]4,21-diisopropyl-2-oxa-12,13-dithia-5,8,20,23-tetraaza-3,6,9,19-pentaoxobibyclo[8,7,6]-tricos-16-ene
CAS: Not available

Molecular Weight: 540.7
Molecular Formula: $C_{24}H_{36}O_6S_2$

Other Designations: Fujisawa cyclic peptide, Fujisawa depsipeptide

SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name	Percent	Exposure Limits
NSC 630176	100%	NOT YET ESTABLISHED

Toxicity Data:

In Vivo Activity:

Single intravenous doses in rats produced an LD_{50} of 2.6-3.6 mg/Kg in males and 3.6-5.1 mg/Kg in females (15.6-30.6 mg/m^2). Single intravenous doses of 1 mg/Kg caused mild liver toxicity and myelosupression. A rapidly administered single dose of 1 mg/mL caused severe local toxicity and lethality. Target organs of toxicity are lymphoid and myeloid tissue, liver and with multiple exposures possibly the heart.

SECTION III. PHYSICAL DATA

Appearance & Odor: White crystals

MP: 261 °C
BP: N/A

Solubility:
Water: 0.39 mg/mL (pH 5.83)
Polyethylenelgycol (PEG 400): 8.99 mg/mL
DMSO: 127 mg/mL

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point: UNKNOWN **Autoignition Temperature:** UNKNOWN
Flammability Limits: **LEL %:** UNKNOWN **UEL %:** UNKNOWN

Extinguishing Media: Water, carbon dioxide, or dry chemical as appropriate to the surrounding fire.

Unusual Fire or Explosion Hazards: No unusual fire or explosion hazard is known to exist.

Special Fire-fighting Procedures: Evacuate personnel to a safe area. Fire fighters should use protective clothing and a self-contained breathing apparatus.

Hazardous Combustion Products: Thermal decomposition may yield carbon monoxide and other toxic substances. Since specific products of combustion are unknown, as a precaution, they should be assumed to be hazardous.

SECTION V. REACTIVITY DATA

Compound Stability: Bulk compound is stable at room temperature.

Chemical Incompatibilities: Strong alkali (pH >10).

Conditions To Avoid: Unknown at this time

Hazardous Decomposition Products: Unknown at this time.

SECTION VI. HEALTH HAZARD INFORMATION

Summary of Risks: The carcinogenicity and teratogenicity of NSC 630176 are unknown.

Primary Entry Routes: Inhalation, ingestion, and skin and/or eye contact.

Target Organs: The target organs of toxicity in animals are lymphoid and myeloid tissue, liver and on repeat exposure, possibly the heart.

Signs & Symptoms of Overexposure: The effects of overexposure to this drug in the workplace are not known. It is anticipated that acute or chronic overexposure could lead to damage of bone marrow, lymphoid, tissue, liver, and possible the heart and reproductive organs or could be fatal. NSC 630176 is cytotoxic and will produce severe toxic effects to rapidly dividing tissues upon overexposure.

Medical Conditions Which May Be Aggravated By Contact: UNKNOWN

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Acute Effects: UNKNOWN
Chronic Effects: UNKNOWN

For Eye Contact: Immediately flush eyes with copious amounts of water for at least 15 minutes. Consult an ophthalmologist.

For Skin Contact: Remove contaminated clothing. Wash skin with plenty of soap and water. Consult a physician. Chemically decontaminate clothing and then launder before reuse or incinerate.

For Inhalation: Remove victim promptly to clean air. If victim is not breathing, administer artificial respiration. If breathing is difficult give oxygen. Consult a physician.

For Ingestion: Remove residual drug. Consult a physician. Provide supportive treatment. No specific antidote exists.

SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

Spill/Leak Cleanup Procedures:
These should be conducted according to the "DTP (NCI) Generic Safe Handling Procedures for Potent Toxic Drugs" (10/13/92): Evacuate area. Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard after use. Avoid raising aerosols by promptly covering the spilled compound with damp paper towels. Pick up compound with additional towels, place in a bag, and hold for waste disposal. Strong alkali and possibly sodium hypochlorite may degrade NSC 630176 to relatively nontoxic derivatives; use of this is advisable. Expose the contaminated area to bleach solution for one hour. Afterwards, first wipe the area with paper towels soaked in bleach solution and then with paper towels wet with water. Ventilate area after compound pick-up and decontamination is complete. Dispose of contaminated clean-up materials properly.

Waste Management/Disposal:
Incineration, at a temperature not less than 1000°C, is the recommended method of disposal. Observe all Federal, state, and local laws concerning the disposal of hazardous material or waste. Dissolve solids in a 10% solution of sodium hypochlorite. Add water miscible organic solvent to drug solutions and then treat with the bleach solution. Contaminated glassware, syringes, wipe-up materials, etc., should also be flushed with the bleach solution to reduce residues of toxic materials.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Personal Protective Equipment:

Goggles: Wear chemical safety goggles when handling NSC 630176.
Gloves: Wear rubber or latex gloves, not polyvinylchloride, when handling NSC 630176.
Respirator: Wear NIOSH-MSHA approved respirator.
Other: Wear protective laboratory coat.

Workplace Considerations:

Ventilation: Laboratory operations should be conducted in a chemical fume hood, glove box, or ventilated cabinet equipped with filtered mechanical exhaust to the outside.

Safety Stations: Safety shower and eye bath should be accessible.

The personal protective equipment listed above should be worn at all times when handling NSC 630176. Avoid contact and inhalation. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

SECTION IX. SPECIAL PRECAUTIONS

Storage Segregation: Store in a tightly-closed container, protected from light at controlled room temperature. Use of a secondary container is recommended.

Other Precautions: The user should be made aware that NSC 630176 is an investigational substance. It is a highly potent cytotoxic agent. Handling as a solid or a solution should be carried out with extreme care to avoid personal exposure. Hazards associated with exposure to NSC 630176 may as yet be unknown. This material should be handled only by those trained in the handling of potentially hazardous material.

For Non-Emergency Information:

Decontamination Procedures 301-496-8780	Chief, Pharmaceutical Resources Branch
Material Safety Data Sheets 301-496-8795	Project Officer, Drug Synthesis And Chemistry Branch
Toxicity Data 301-496-8777	Chief, Toxicology Branch
