

Safety Data Sheet

Liothyronine Injection (T₃)

Section 1: Chemical Product and Company Identification

Product Name: Liothyronine Sodium

Chemical Name(s): Not available

Synonym: Triiodothyronine

CAS Number: 55-06-1

RTECS #: Not available

Trade Name: Not available

Chemical Formula: $C_{15}H_{11}I_3NaNO_4$



Health	2
Fire	1
Reactivity	0
Personal Protection	E

Contact Information:

X-GEN Pharmaceuticals, Inc.

PO Box 445, Big Flats, NY 14814

Technical Assistance: 607-562-2700

Online Assistance: www.x-gen.us

Emergency phone number:

National Poison Control

1-800-222-1222

**For information regarding recommended uses and restrictions on usage refer to the product package insert.

Section 2: Hazard Identification

Hazard pictograms (GHS-US):



Potential Acute Health Effects: Hazardous in case of ingestion and of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects: Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of ingestion or inhalation (lung irritant). Inflammation of the eye is characterized by redness, watering and itching. Skin inflammation is characterized by itching, redness or occasionally blistering.

Carcinogenic Effects: Not available

Mutagenic Effects: Not available

Teratogenic Effects: Not available

Developmental Toxicity: Not available

Adverse effects: Not available

Section 3: Composition and Information on Ingredients

Principle Components:

<u>Name</u>	<u>CAS #</u>	<u>% by Weight</u>
Liothyronine, sodium	55-06-1	<0.001
Anhydrous Citric Acid NF	77-92-9	0.02
Ammonia Hydroxide, NF	1336-21-6	0.2
Alcohol, NF	65-56-1	5.3
Water for Injection, USP	7789-20-0	94.45

Section 4: First Aid Measures

General: Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposure. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. Obtain medical attention.

Inhalation: If mist and/or vapor is inhaled, remove to fresh air and rest in a well ventilated area. May cause irritation and bronchospasm. Seek medical attention immediately.

Skin contact: After contact with skin wash immediately with plenty of water and non-abrasive soap. This material is not absorbed through intact skin. Seek medical attention immediately.

Eye contact: Check for and remove contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Cold water may be used. DO NOT use eye ointment. Seek medical attention immediately.

Ingestion: DO NOT induce vomiting. May cause irritation. May cause gastrointestinal irritation. Flush mouth with water if ingested. This material is absorbed in the gastrointestinal tract. Loosen tight clothing such as tie, collar and/or belt. Seek medical attention immediately.

Notes to physician: Seek product package insert for complete information.

Overdose Treatment: Treat overdose symptomatically.

Section 5: Fire Fighting Measures

Flammability of the product: May be combustible at high temperatures.

Combustion Products: These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...) and halogenated compounds.

Unusual Fire and Explosion Hazards: This material is assumed to be combustible.

Extinguishing Media and Instruction:

Small fire: Use DRY chemical powder. **Large fire:** Use water spray, fog or foam. DO NOT use water jet.

Protective equipment & precautions for firefighters: As with all fires, evacuate personnel to a safe area. Firefighters should wear self-contained breathing apparatus and protective clothing.

Special remarks on fire hazard: Not available

Special remarks on explosion hazard: Not available

Section 6: Accidental Release Measures

Release to land:

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, state, and federal regulations.

Large spill: Use a shovel to put the material into a convenient waste disposal container. Sweep up or vacuum. Finish cleaning by spreading water on the contaminated surface and clean surface thoroughly to remove residual contamination. Collect in suitable container for disposal. For proper waste disposal, see section 13 of the SDS.

Release to air: Not available.

Release to water: Refer to local water authority; drain disposal is not recommended.

Protective equipment: Keep unnecessary personnel away. Wear approved respiratory protection, chemically compatible gloves and protective clothing such as protective coveralls and shoe covers for spills.

Section 7: Handling and Storage

Handling: As a general rule, when handling Liothyronine Injection (T₃), avoid all contact and inhalation of mists and/or vapors associated with the material.

Keep locked up. Keep away from heat, sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Use only in accordance with directions.

Storage: Keep container tightly closed, light resistant container. Keep container in a cool, dry, well ventilated area. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents. Store between 2° - 8°C (36° - 46°F). Refer to label instructions to ensure product integrity.

Incompatibilities: Oxidizing agents.

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 fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protection: Safety glasses. Lab coat. Gloves. Respirator (Be sure to use an approved/ certified respirator or equivalent). **In case of large spill:** Splash goggles. Full suit. 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.

Respiratory protection: Under normal use, respirators are not required. If mists or vapors are generated, use a disposable mask (N95). Personnel wearing respirators should be fit tested and approved for respirator use, under OSHA Respiratory Protection Standard 29 CFR 1910.134.

Exposure limit: Not available

Section 9: Physical and Chemical Properties

Physical appearance: Liquid

Color: Clear

Molecular Weight: 672.96 g/mole

Taste: Not available

Odor: Odorless

Odor Threshold: Not available

pH: Not available

Melting Point: Not available

Freezing Point: Not available

Boiling Point: Not available

Flash Point: Not available

Evaporation rate: Not available

Flammability: Not available

Upper Flammable Limit: Not available

Lower Flammable Limit: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Relative density: Not available

Partition Coefficient: Not available

Auto-Ignition Temperature: Not available

Decomposition Temperature: Not available

Viscosity: Not available

Dispersion Properties: Not available

Solubility: Soluble.

Section 10: Stability and Reactivity

Reactivity: Not available

Chemical stability: The product is stable.

Possibility of hazardous reaction: Not available

Conditions to avoid: Avoid exposure to light, heat, sparks and other sources of ignition.

Incompatible materials: Oxidizing agents.

Hazardous decomposition products: When heated to decomposition material emits oxides of nitrogen, oxides of carbon, iodine, chlorine. Emits toxic fumes under fire conditions.

Corrosivity: Non-corrosive in presence of glass.

Polymerization: Unknown to occur.

Section 11: Toxicological Information

Routes of exposure: Primary occupational exposure routes are via eye contact and ingestion.

Symptoms:

Short term: Hazardous in case of skin (irritant). Hazardous in case of ingestion and of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator). **Long term:** Possible hyper sensitization.

Reproductive toxicity: Not available

FDA Pregnancy Category: A

Toxicity to animals: Not available

Measures of toxicity: Not available

Additional reproductive health and toxicity data is available from the National Institute for Occupational Safety and Health (NIOSH) and/or Registry of Toxic Effects of Chemical Substance (RTECS)

Section 12: Ecological Information

Ecotoxicity: Not available

Bioaccumulation potential: Not available

Products of biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the products of biodegradation: The products of degradation are more toxic.

Section 13: Disposal Information

Waste classification: Not available

Waste from residues/unused products: Dispose of waste in accordance with all applicable federal, state and local laws.

Waste Disposal: Dispose of waste in accordance with all applicable federal, state and local laws.

Section 14: Transport Information

DOT Classification: Not a DOT controlled Material (United States).

UN Number: Not available

UN Shipping name: Not available

Transport hazard class: Not available

Packing Group: Not available

Environmental hazard: Not available

Transport in bulk: Not available

Special precautions needed with transport: Not available

Section 15: Regulatory Information

Federal and State Regulations: Not available

Other Regulations: OSHA: Hazardous by definition of Hazardous Communication Standards (29 CFR 1910.1200).

Other Classifications:

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

DSCL (EEC): R37/38 – Irritating to respiratory system and 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

Protective Equipment: Gloves, lab coat, safety glasses and respirator. Be sure to use an approved/certified respirator or equivalent.

Section 16: Other Information

References: Not available

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Prepared & Approved by: X-GEN Pharmaceuticals, Inc., Safety Committee

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