

## Material Safety Data Sheet

Technical phone	732-885-9188 ext 127
Emergency phone	732-885-9188 ext 111
Fax	732-210-0262
Email	info@genscript.com
Date updated	06/26/2008

### Section 1-Product Information

Product name	Thyrotropin-Releasing Hormone (TRH)
Product Cat. No.	RP10112

### Section 2-Composition / Information on Ingredients

Substance/Preparation:	Substance
Ingredient Name	Thyrotropin-Releasing Hormone (TRH)
CAS No.	24305-27-9
SARA 313	No
Formula	C <sub>16</sub> H <sub>22</sub> N <sub>6</sub> O <sub>4</sub>

### Section 3- Hazards Identification

#### Emergency Overview

##### Caution

Avoid contact and inhalation.

For additional information on toxicity, please refer to Section 11.

### Section 4- First Aid Measures

Oral Exposure	If swallowed, wash out mouth with water provided person is conscious. Call a physician.
Inhalation Exposure	If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
Dermal Exposure	In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.
Eye Exposure	In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

### Section 5- Fire Fighting Measures

Flash Point	Not available
Autoignition Temp	Not available
Flammability	Not available
Extinguishing Media	
Suitable	Carbon dioxide, dry chemical powder, or appropriate foam. Water spray
Fire Fighting	
Protective Equipment	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s):	Emits toxic fumes under fire conditions.

### Section 6- Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill	Evacuate area
Procedure(s) of Personal Precaution(s)	Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves
Methods for Cleaning up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

### Section 7-Handling and Storage

Handling

User Exposure	Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	
Suitable	Keep tightly closed
Storage at -20°C	

## Section 8-Exposure Controls/Personal Protection Equipment

Engineering Controls	Mechanical exhaust required
Personal Protective equipment	
Respiratory	Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator.
Other	Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.
General Hygiene Measures	Wash thoroughly after handling

## Section 9- Physical and Chemical Properties

Appearance	
Physical State	White powder
Property	
Molecular Weight	362.38 AMU
pH	Not available
BP/BP Range	Not available
MP/MP Range	Not available
Freezing Point	Not available
Vapor Pressure	Not available
Vapor Density	Not available
Saturated Vapor Conc.	Not available
SG/Density	Not available
Bulk Density	Not available
Odor Threshold	Not available
Volatile%	Not available
VOC Content	Not available
Water Content	Not available
Solvent Content	Not available
Evaporation Rate	Not available
Viscosity	Not available
Surface Tension	Not available
Partition Coefficient	Not available
Decomposition Temp.	Not available
Flash Point	Not available
Explosion Limits	Not available
Flammability	Not available
Autoignition Temp	Not available
Refractive Index	Not available
Optical Rotation	Not available
Miscellaneous Data	Not available
Solubility	Soluble in water to 10 mg/ml, appearing clear and colorless.

## Section 10- Stability and Reactivity

Stability	
Stable	Stable
Materials to Avoid:	Strong acids, Strong bases.
Hazardous Decomposition Products	
Hazardous Decomposition Products	Carbon monoxide, Carbon dioxide, Nitrogen oxides.
Hazardous Polymerization	
Hazardous Polymerization	Will not occur

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## Section 11- Toxicological Information

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Route of Exposure	
Skin Contact	May cause skin irritation
Skin Absorption	May be harmful if absorbed through the skin
Inhalation	Material may be irritating to mucous membranes and upper respiratory tract, May be harmful if inhaled.
Ingestion	May be harmful if swallowed
Signs And Symptoms Of Exposure	Blood effects. Nausea, dizziness, and headache. Exposure can cause: Other effects include the urge to urinate, abdominal discomfort, and dry mouth.
Conditions Aggravated by Exposure	The toxicological properties have not been thoroughly investigated.
TOXICITY DATA	
Oral	
Rat	> 5000 mg/kg, LD50
Subcutaneous	
Rat	>10 mg/kg, LD50
Intravenous	
Rat	514 mg/kg, LD50
Oral	
Mouse	> 10000 mg/kg, LD50
Subcutaneous	
Mouse	>20 mg/kg, LD50
Intravenous	
Mouse	921 mg/kg, LD50
CHRONIC EXPOSURE - TERATOGEN	
Species:	Rat
Dose:	2 mg/kg
Route of Application:	Intraperitoneal
Exposure Time:	(7-16D PREG)
Result:	Effects on Newborn: Stillbirth. Specific Developmental
Abnormalities:	Urogenital system.
Species:	Mouse
Dose:	150 mg/kg
Route of Application:	Intraperitoneal
Exposure Time:	(6-15D PREG)
Result:	Specific Developmental Abnormalities: Musculoskeletal system. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
Chronic Exposure - Reproductive Hazard	
Species:	Rat
Dose:	20 mg/kg
Route of Application:	Intraperitoneal
Exposure Time:	(7-16D PREG)
Result:	Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Species:	Rat
Dose:	200 mg/kg
Route of Application:	Intraperitoneal
Exposure Time:	(7-16D PREG)
Result:	Effects on Newborn: Sex ratio.

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## Section 12- Ecological Information

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No data available.

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## Section 13- Disposal Considerations

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Appropriate Method of Disposal of Substance or Preparation	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all
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federal, state, and local environmental regulations.

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## Section 14- Transport Information

### DOT

Proper Shipping Name	None
Non-Hazardous for Transport	This substance is considered to be non-hazardous for transport.

### IATA

Non-Hazardous for Air Transport	Non-hazardous for air transport
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## Section 15- Regulatory Information

### EU Additional Classification

S	22-24/25
Safety Statements:	Do not breathe dust. Avoid contact with skin and eyes.

### US Classification and Label Text

US Statements	Caution: The chemical, physical, and toxicological properties of this product have not been thoroughly investigated. Exercise due care.
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### United States Regulatory information

SARA Listed	No
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### Canada Regulatory information

WHMIS Classification	This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
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DSL	No
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NDSL	No
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## Section 16- Other Information

GenScript corporation MSDS is believed to be correct but only used as a guide for experienced personnel, GenScript shall not be held liable for any damage resulting from the handling or from contact with the above product.

**NON-CLINICAL RESEARCH ONLY NOT FOR HUMAN INTAKE**