

## Material Safety Data Sheet

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Date updated	07/01/2008

### Section 1-Product Information

Product name	Melittin
Product Cat. No.	RP10290

### Section 2-Composition / Information on Ingredients

Substance/Preparation:	Substance
Ingredient Name	Melittin
CAS No.	20449-79-0
SARA 313	No
Formula	C <sub>131</sub> H <sub>229</sub> N <sub>39</sub> O <sub>31</sub>

### Section 3- Hazards Identification

HMIS Rating	
Health	2
Flammability	0
Reactivity	0
NFPA Rating	
Health	2
Flammability	0
Reactivity	0

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	Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.
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

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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

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Engineering Controls	Use only in a chemical fume hood. Safety shower and eye bath.
Personal Protective equipment	
Respiratory	Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand	Compatible chemical-resistant gloves
Eye	Chemical safety goggles
General Hygiene Measures	Wash contaminated clothing before reuse. Wash thoroughly after handling.

## Section 9- Physical and Chemical Properties

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Appearance	
Physical State	Faintly beige powder
Property	
Molecular Weight	2846.46 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	Not available

## Section 10- Stability and Reactivity

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Stability	
Stable	Stable
Materials to Avoid	Strong oxidizing agents

Hazardous Decomposition Products	
Hazardous Decomposition Products	Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides.
Hazardous Polymerization	
Hazardous Polymerization	Will not occur

## Section 11- Toxicological Information

Route of Exposure	
Skin Contact	May cause skin irritation
Skin Absorption	Toxic if absorbed through skin.
Inhalation	Material may be irritating to mucous membranes and upper respiratory tract. Toxic if inhaled.
Ingestion	Toxic if swallowed.
Toxicity Data	
Intraperitoneal	
	Rat
	17700 ug/kg
	LD50
Intraperitoneal	
	Mouse
	7400 ug/kg
	LD50
Intravenous	
	Mouse
	7040 ug/kg
	LD50
Intraperitoneal	
	Guinea pig
	2750 ug/kg
	LD50

## Section 12- Ecological Information

No data available.

## Section 13- Disposal Considerations

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 federal, state, and local environmental regulations.
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## Section 14- Transport Information

DOT	
Proper Shipping Name	Toxins, extracted from living sources, solid, n.o.s.
UN#	3462
Class	6.1
Packing Group	Packing Group I
Hazard Label:	Toxic substances
PIH	Not PIH
IATA	Non-hazardous for air transport
Proper Shipping Name	Toxins, extracted from living sources, solid, n.o.s.
IATA UN Number	3462
Hazard Class	6.1
Packing Group	Packing Group I

## Section 15- Regulatory Information

EU Additional Classification	
Symbol of Danger	T
Indication of Danger	Toxic
R	23/24/25
Risk Statements:	Toxic by inhalation, in contact with skin and if swallowed.
S	36/37/39-45

Safety Statements:	Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
US Classification and Label Text	
Safety Statements	Do not breathe dust. Avoid contact with skin and eyes.
United States Regulatory information	
SARA Listed	No
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.
DSL	No
NDSL	No

## 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.