

Section 1-Identification of Substance/ Identification of Company

Product name	Antimicrobial peptide, Caerin 2.3
Product Cat. No.	303866
Chemical Formula:	$C_{105}H_{185}N_{29}O_{32}$
Supplier:	NovoPro Bioscience Inc. Phone: 86-21-61842887 Fax: 86-213-332-1005

Section 2-Composition / Information on Ingredients

Substance/Preparation:	Substance
Ingredient Name	Antimicrobial peptide, Caerin 2.3
SARA 313	No

Section 3- Hazards Identification**Emergency Overview**

Caution	The chemical, physical, and toxicological properties of this product have not been thoroughly investigated. Exercise due care.
HMIS Rating	
Health	1
Flammability	0
Reactivity	0
NFPA Rating	
Health	1
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	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

Powder

Property

Molecular Weight

2365.7

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

Stability	
Stable	Stable
Hazardous Decomposition Products	
Hazardous Decomposition Products	Nature of decomposition products not known.
Hazardous Polymerization	
Hazardous Polymerization	Will not occur

Section 11- Toxicological Information

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
Conditions Aggravated by Exposure	The toxicological properties have not been thoroughly investigated.

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	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

Section 15- Regulatory Information

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.

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

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