

Revision Date:15-Jan-2020

Section 1-Identification of Substance/ Identification of Company		
Product name	Peptide E-2	
Product Cat. No.	305638	
Chemical Formula:	$C_{79}H_{133}N_{23}O_{21}$	
Supplier:	NovoPro Bioscience Inc.	
••	Phone: +86-21-61941042	
	Fax: 86-216-194-1042	
Section 2-Composition / Information on Ingredients		
Substance/Preparation:	Substance	
Ingredient Name	Peptide E-2	
SARA 313	No	
Section 3- Hazards Identification		
Classification	This substance/mixture is not considered hazardous by the	
	2012 OSHA Hazard Communication Standard (29 CFR	
	1910.1200)	
GHS Label elements, including precautionary statements		
Signal Word	Not classified	
Hazard statement(s)	None.	
Precautionary Statement(s)	None.	
Supplementary Hazard Information	May produce an allergic reaction	
Hazards not otherwise classified	Not applicable.	
(HNOC)		

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
Dormai Enposaro	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.
	1 / 4



Section 6- Accidental Release Measures   Evacuate area     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   Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.     Storage   Suitable     Suitable   Keep tightly closed     Storage at -20°C   Mechanical exhaust required     Personal Protective equipment   Mechanical exhaust required     Respiratory   Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (US). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. chemical-resistant gloves, safety goggles, other protective clothing.     General Hygiene Measures   Wash thoroughly after handling     Section 9- Physical and Chemical Properties   Powder     Appearance   Physical State     Physion State   Powder     Property   Molecular Weight   1741 pH     Phy Range   Not available
Leak or Spill   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   Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.     Storage   Suitable   Keep tightly closed     Storage at -20°C   Mechanical exhaust required     Personal Protective equipment   Mechanical exhaust required     Respiratory   Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU) Respirator, chemical-resistant gloves, safety goggles, other protective clothing.     Other   Wear appropriate gloves, safety goggles, other protective clothing.     General Hygiene Measures   Wash thoroughly after handling     Section 9- Physical and Chemical Properties   Appearance     Appearance   Physical State     Property   Molecular Weight     Molecular Weight   1741     pH   Not available
Procedure(s) of Personal Precaution(s) Methods for Cleaning upWear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves 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 StorageAvoid raising dust. Ventilate area and wash spill site after material pickup is complete.Section 7-Handling and StorageAvoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.Storage SuitableKeep tightly closedStorage at -20°CMechanical exhaust requiredPersonal Protective equipment RespiratoryMechanical exhaust requiredPersonal Protective equipment (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. Chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical Protecties Physical State Property Molecular Weight PHy Angpe Molecular Weight PHy RangeNot available Not available
Methods for Cleaning upand heavy rubber glovesMethods for Cleaning upSweep 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 StorageHandling User ExposureAvoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.Storage Suitable Storage at -20°CKeep tightly closedSection 8-Exposure Controls/Personal Protection Equipment Engineering ControlsMechanical exhaust requiredPersonal Protective equipment RespiratoryUse 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. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical Properties Appearance Physical State Property Molecular Weight PH PH PH PH PH PH PH PH Not available Not available
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
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     Suitable   Keep tightly closed     Storage at -20°C   Vertice Equipment     Respiratory   Mechanical exhaust required     Personal Protective equipment   Mechanical exhaust required     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   1741     pH   Not available   Not available
material pickup is complete.     Section 7-Handling and Storage     Handling   User Exposure     Viser Exposure   Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.     Storage   Skirage at -20°C     Section 8-Exposure Controls/Personal Protection Equipment   Engineering Controls     Personal Protective equipment   Mechanical exhaust required     Personal Protective equipment   Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required.     Other   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 Proverties   Appearance     Physical State   Powder     Property   Moleccular Weight   1741     pH   Not available     BP/BP Range   Not available
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   Keep tightly closed   Storage     Section 8-Exposure Controls/Personal Protection Equipment   Mechanical exhaust required     Engineering Controls   Mechanical exhaust required     Personal Protective equipment   Were 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     Appearance   Powder     Property   Molecular Weight   1741     pH   Not available     BP/BP Range   Not available
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   Mechanical exhaust required     Respiratory   Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required.     Other   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     Molecular Weight   1741     pH   Not available     BP/BP Range   Not available
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   Mechanical exhaust required     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     Molecular Weight   1741     pH   Not available     BP/BP Range   Not available
User ExposureAvoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.Storage SuitableKeep tightly closedStorage at -20°CSection 8-Exposure Controls/Personal Protection EquipmentEngineering ControlsMechanical exhaust requiredPersonal Protective equipmentWeer espirators 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. 
Storage Suitable Storage at -20°Cclothing. Avoid prolonged or repeated exposure.Section 8-Exposure Controls/Personal Protection EquipmentKeep tightly closedEngineering ControlsMechanical exhaust requiredPersonal Protective equipment RespiratoryUse 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. OtherOtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesPowderAppearance Property Molecular Weight1741 PHpHNot availableBP/BP RangeNot available
Storage   Suitable   Keep tightly closed     Storage at -20°C   Section 8-Exposure Controls/Personal Protection Equipment     Engineering Controls   Mechanical exhaust required     Personal Protective equipment   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     Molecular Weight   1741     pH   Not available     BP/BP Range   Not available
Suitable Storage at -20°CKeep tightly closedSection 8-Exposure Controls/Personal Personal Protective equipment RespiratoryMechanical exhaust requiredPersonal Protective equipment RespiratoryUse 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. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical Property Molecular Weight pHPowderProperty Molecular Weight BP/BP RangeT41 Not available
Section 8-Exposure Controls/Personal Protection Equipment     Engineering Controls   Mechanical exhaust required     Personal Protective equipment   Mechanical exhaust required     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     Molecular Weight   1741     pH   Not available     BP/BP Range   Not available
Section 8-Exposure Controls/Personal Protection Equipment     Engineering Controls   Mechanical exhaust required     Personal Protective equipment   Mechanical exhaust required     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     Molecular Weight   1741     pH   Not available     BP/BP Range   Not available
Engineering ControlsMechanical exhaust requiredPersonal Protective equipment RespiratoryUse 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. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical Properties AppearancePowderProperty Molecular Weight1741 pH Not availablePH BP/BP RangeNot available
Personal Protective equipment   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   1741     pH   Not available     BP/BP Range   Not available
RespiratoryUse 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. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderProperty Molecular Weight pH BP/BP Range1741 Not availableMole cular Weight BP/BP Range1741 Not available
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. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.OtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderProperty Molecular Weight1741 Not availablepH BP/BP RangeNot available
(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. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderProperty Molecular Weight1741 Not availablePH BP/BP RangeNot available
Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderProperty Molecular Weight1741 Not availablepH BP/BP RangeNot available
Otheruse type N95 (US) or type P1 (EN 143) respirator. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderProperty Molecular Weight1741 Not availablePH BP/BP RangeNot available
OtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyInterventionMolecular Weight1741pHNot availableBP/BP RangeNot available
chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyInterventionMolecular Weight1741pHNot availableBP/BP RangeNot available
clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyInternet to the section of th
General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePowderPhysical StatePowderPropertyInternet to the second sec
Section 9- Physical and Chemical Properties   Appearance   Physical State Powder   Property International Property   Molecular Weight 1741   pH Not available   BP/BP Range Not available
AppearancePhysical StatePowderPropertyI741Molecular Weight1741pHNot availableBP/BP RangeNot available
AppearancePhysical StatePowderPropertyI741Molecular Weight1741pHNot availableBP/BP RangeNot available
Physical StatePowderProperty1741Molecular Weight1741pHNot availableBP/BP RangeNot available
Property1741Molecular Weight1741pHNot availableBP/BP RangeNot available
Molecular Weight1741pHNot availableBP/BP RangeNot available
pH Not available BP/BP Range 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
Bulk DensityNot availableOdor ThresholdNot available
Bulk DensityNot availableOdor ThresholdNot availableVolatile%Not available
Bulk DensityNot availableOdor ThresholdNot availableVolatile%Not availableVOC ContentNot available
Bulk DensityNot availableOdor ThresholdNot availableVolatile%Not availableVOC ContentNot availableWater ContentNot available
Bulk DensityNot availableOdor ThresholdNot availableVolatile%Not availableVOC ContentNot availableWater ContentNot availableSolvent ContentNot available
Bulk DensityNot availableOdor ThresholdNot availableVolatile%Not availableVOC ContentNot availableWater ContentNot availableSolvent ContentNot availableEvaporation RateNot available
Bulk DensityNot availableOdor ThresholdNot availableVolatile%Not availableVOC ContentNot availableWater ContentNot availableSolvent ContentNot available



Partition Coefficient Decomposition Temp. Flash Point Explosion Limits Flammability Autoignition Temp Refractive Index Optical Rotation Miscellaneous Data Solubility	Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available
Section 10- Stability and Reactivity	
Stability Stable Hazardous Decomposition Products Hazardous Decomposition Products Hazardous Polymerization Hazardous Polymerization	Stable Nature of decomposition products not known. Will not occur
Section 11- Toxicological Information	
Route of Exposure Skin Contact Eye contact Inhalation	Avoid contact with skin. Avoid contact with eyes. May cause slight irritation. Avoid breathing vapors or mists. May cause irritation of respiratory tract.
Ingestion Conditions Aggravated by Exposure	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. The toxicological properties have not been thoroughly investigated.

This product is for experimental uses only. The product has not been completely analyzed and all of the hazards may not be known.

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.
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.