SAFETY DATA SHEET



BioEstolide 250

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier	
Product name	: BioEstolide 250
EC number	: Not available.
CAS number	: 2361055-93-6
Product code	: BE250
Product description	: Not available.
Product type	: Liquid.
Other means of identification	: Acetyl Ethylhexyl Polyhydroxystearate

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses			
Not available.			
Uses advised against	Reason		
None known.			

1.3 Details of the supplier of the safety data sheet

Biosynthetic Technologies The Center 6320 Intech Way Indianapolis, Indiana 46278 USA Technical Services: 317-556-1050

Only Representative H2 Compliance The Rubicon Centre CIT Campus Bishop, Cork, Ireland +353-21-486-8120 e-mail address of person : info@biosynthetic.com responsible for this SDS

1.4 Emergency telephone number

Supplier

Telephone number : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mono-constituent substance

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended. See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Date of issue/Date of revision

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SECTION 2: Hazards identification

Signal word	1	No signal wo	rd.			
Hazard statements	1	No known sig	gnificant ef	fects or crit	ical hazaro	ls.
Precautionary statements						
Prevention	1	Not applicabl	e.			
Response	1	Not applicabl	e.			
Storage	4	Not applicabl	e.			
Disposal	4	Not applicabl	e.			
Hazardous ingredients	1	None				
Supplemental label elements	:	Not applicabl	e.			
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Not applicabl	e.			
Special packaging requirem	ent	t <u>s</u>				
Containers to be fitted with child-resistant fastenings	:	Not applicabl	e.			
Tactile warning of danger	:	Not applicabl	e.			
2.3 Other hazards						
Product meets the criteria	4	PBT	Р	В	Т	vPvB
for PBT or vPvB according		Na	NI/A	NI/A	Na	NI/A

Product meets the criteria : for PBT or vPvB according	PBT	Р	В	Т	vPvB	vP	vB	
to Regulation (EC) No. 1907/2006, Annex XIII	No	N/A	N/A	No	N/A	N/A	N/A	
Other hazards which do	None known							

Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

3.1 Substances : N	lono-constituent substance			
Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Туре
Octadecanoic acid, 12-hydroxy-, homopolymer, 2-ethylhexyl ester, acetate	CAS: 2361055-93-6	100	Not classified.	[A]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

<u>Type</u>

[A] Constituent

[B] Impurity

[C] Stabilising additive

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

SECTION 4: First aid measures				
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.			
Ingestion	: Wash out mouth with water. Remove victim to fresh air and keep at rest in a positi comfortable for breathing. If material has been swallowed and the exposed person conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.	n is		
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training.			

4.2 Most important symptoms and effects, both acute and delayed

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.
Over-exposure signs/symp	otoms
Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media		
Suitable extinguishing media	:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	Do not use water jet.
5.2 Special hazards arising fr	om	the substance or mixture
Hazards from the substance or mixture	:	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	:	No specific data.
5.3 Advice for firefighters		
Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, pro	ote	ctive equipment and emergency procedures
For non-emergency personnel	-	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	:	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
6.3 Methods and material for	co	ntainment and cleaning up
Small spill	:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
6.4 Reference to other sections	:	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures	: Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)	
Recommendations	: Not available.
Industrial sector specific	: Not available.
solutions	

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Individual protection measure	S	
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Skin protection		
Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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SECTION 8: Exposure controls/personal protection

Environmental exposure	: Emissions from ventilation or work process equipment should be checked to ensure
controls	they comply with the requirements of environmental protection legislation. In some
	cases, fume scrubbers, filters or engineering modifications to the process equipment
	will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties				
<u>Appearance</u>				
Physical state	1	Liquid.		
Colour	1	Amber. [Light]		
Odour	1	Sweetish. [Slight]		
Odour threshold	1	Not available.		
рН	1	Not available.		
Melting point/freezing point	1	Not available.		
Initial boiling point and boiling range	:	Not available.		
Flash point	1	Open cup: >260°C [Cleveland.]		
Evaporation rate	1	Not available.		
Flammability (solid, gas)	1	Not available.		
Upper/lower flammability or explosive limits	1	Not available.		
Vapour pressure	÷	Not available.		
Vapour density	1	Not available.		
Relative density	1	0.9161		
Solubility(ies)	1	Not available.		
Partition coefficient: n-octanol/ water	1	Not available.		
Auto-ignition temperature	:	Not available.		
Decomposition temperature	1	Not available.		
Viscosity	1	Kinematic (40°C): 1.505 cm²/s		
Explosive properties	1	Not available.		
Oxidising properties	÷	Not available.		
9.2 Other information				
Solubility in water	1	Not available.		
Pour point	:	-21°C		

SECTION 10: Stability and reactivity

Date of issue/Date of revision		: 5/8/2020 Version : 1.3	6/11
10.6 Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.	
10.5 Incompatible materials	:	No specific data.	
10.4 Conditions to avoid	:	No specific data.	
10.3 Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.	
10.2 Chemical stability	:	The product is stable.	
10.1 Reactivity	1	No specific test data related to reactivity available for this product or its ingredients.	

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SECTION 11: Toxicological information

11.1 Information on toxicological effects **Acute toxicity Conclusion/Summary** : Not available. Acute toxicity estimates N/A Irritation/Corrosion **Conclusion/Summary** : Not available. **Sensitisation Conclusion/Summary** : Not available. **Mutagenicity Conclusion/Summary** : Not available. **Carcinogenicity Conclusion/Summary** : Not available. **Reproductive toxicity Conclusion/Summary** : Not available. **Teratogenicity** Conclusion/Summary : Not available. Specific target organ toxicity (single exposure) Not available. Specific target organ toxicity (repeated exposure) Not available. Aspiration hazard Not available. Information on likely routes : Not available. of exposure Potential acute health effects Eye contact : No known significant effects or critical hazards. Inhalation : No known significant effects or critical hazards. Skin contact : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards. Symptoms related to the physical, chemical and toxicological characteristics Eye contact : No specific data. Inhalation : No specific data. : No specific data. Skin contact Ingestion : No specific data. Delayed and immediate effects as well as chronic effects from short and long-term exposure Short term exposure **Potential immediate** : Not available. effects **Potential delayed effects** : Not available. Long term exposure **Potential immediate** : Not available. effects Potential delayed effects : Not available.

: 5/8/2020

Potential	chronic	health	effects

	Date of	issue/Date of revision	
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SECTION 11: Toxicological information

Not available.

Conclusion/Summary General Carcinogenicity Mutagenicity Teratogenicity Developmental effects	 Not available. No known significant effects or critical hazards.
Developmental effects Fertility effects	No known significant effects or critical hazards.No known significant effects or critical hazards.

Other information

: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary	: Not available.
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12.2 Persistence and degradability

Conclusion/Summary	: Not available.
Conclusion/Summary	: Not availabl

Not available.

12.4 Mobility in soil	
Soil/water partition coefficient (K _{oc})	: Not available.
Mobility	: Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	Р	В	Т	vPvB	vP	vB
Octadecanoic acid, 12-hydroxy-, homopolymer, 2-ethylhexyl ester, acetate	No	N/A	N/A	No	N/A	N/A	N/A

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods <u>Product</u>	
Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.
Packaging	

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SECTION 13: Disposal considerations

Methods of disposal	:	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Special precautions	:	This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

- : Not applicable.

14.6 Special precautions for user

: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk: Not available.according to Annex II of
Marpol and the IBC Code

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture <u>EU Regulation (EC) No. 1907/2006 (REACH)</u>

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable.

on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

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SECTION 15: Reg	gulato	ory information					
This product is not controlled under the Seveso Directive.							
International regulations							
Chemical Weapon Conv	<u>vention</u>	List Schedules I, II & III Chemicals					
Not listed.							
Montreal Protocol (Anne	exes A,	B, C, E)					
Not listed.							
Stockholm Convention	on Pers	sistent Organic Pollutants					
Not listed.	0						
Dettender Convertion	on Duio	- Informed Concert (PIC)					
Not listed.	on Prio	r Informed Consent (PIC)					
NOT IISTED.							
UNECE Aarhus Protoco	ol on PO	<u>Ps and Heavy Metals</u>					
Not listed.							
Inventory list							
Australia	:	Not determined.					
Canada	:	This material is listed or exempted.					
China	:	Not determined.					
Europe	:	This material is listed or exempted.					
Japan	:	Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.					
New Zealand	:	Not determined.					
Philippines	:	Not determined.					
Republic of Korea	:	Not determined.					
Taiwan	:	Not determined.					
Thailand	:	Not determined.					
Turkey	:	Not determined.					
United States	:	This material is listed or exempted.					
Viet Nam	:	Not determined.					
15.2 Chemical safety	:	Not available.					

SECTION 16: Other information

✓ Indicates information that has changed from previously issued version.

Abbreviations and acronyms	1	ATE = Acute Toxicity Estimate
		CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.
		1272/2008]
		DMEL = Derived Minimal Effect Level
		DNEL = Derived No Effect Level
		EUH statement = CLP-specific Hazard statement
		N/A = Not available
		PBT = Persistent, Bioaccumulative and Toxic
		PNEC = Predicted No Effect Concentration
		RRN = REACH Registration Number
		SGG = Segregation Group
		vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification		
Not classified.			

Full text of abbreviated H statements

SECTION 16: Other information

Not applicable.

Full text of classifications [CL	P/	<u>GHS]</u>
Not applicable.		
Date of issue/ Date of	:	5/8/202

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Version	:	1.3

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.