

				1 ULUE COUDADV/L	HUCHANHU			
			entification of the Substance/Mixture and					
.1	Produc		26971					
		t Name:	1,3-Dilinoleoyl-2-Stearoyl-rac-glycerol					
	Synonyms: 9,12-octadecadienoic acid, 1,1'-[2-[(1-oxooctadecyl)oxy]-1,3-propanediyl] ester;							
	1,3-Linolein-2-Stearin; 1-Stearin-2-Olein-3-Linolein; 18:2/18:0/18:2-TG; TG(18:2/18:0/18:2);							
2	Relevant identified uses of the substance or mixture and uses advised against:							
	Relevant identified uses: For research use only, not for human or veterinary use.							
.3		of the Supplier of the	-					
			Cayman Chemical Company					
			1180 E. Ellsworth Rd.					
	Woh	site address:	Ann Arbor, MI 48108 www.caymanchem.com					
		nation:	Cayman Chemical Company	±1 (73	34)971-3335			
				τι (7 5				
.4	-	ency telephone numb	CHEMTREC Within USA and Canada:	1 (90	00/424 0200			
	Emer	gency Contact:			00)424-9300			
			CHEMTREC Outside LISA and Canada:	1 (70	13/577-3887			
			CHEMTREC Outside USA and Canada:)3)527-3887			
			CHEMTREC Outside USA and Canada: Section 2. Hazards Iden)3)527-3887			
.1	Classif	ication of the Substa	Section 2. Hazards Iden		03)527-3887			
		ication of the Substa	Section 2. Hazards Iden		03)527-3887			
	Label E		Section 2. Hazards Iden		03)527-3887			
	Label E GHS	lements:	Section 2. Hazards Iden		03)527-3887			
	Label E GHS GHS	ilements: Signal Word: Hazard Phrases:	Section 2. Hazards Iden nce or Mixture: None	tification				
	Label E GHS GHS Based	Elements: Signal Word: Hazard Phrases: d on evaluation of curr	Section 2. Hazards Iden	tification				
	Label E GHS GHS Based GHS	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases:	Section 2. Hazards Iden nce or Mixture: None	tification				
	Label E GHS GHS Based GHS No ph	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply.	Section 2. Hazards Iden nce or Mixture: None	tification				
	Cabel E GHS GHS Based GHS No ph GHS	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases:	Section 2. Hazards Iden nce or Mixture: None	tification				
	Label E GHS Based GHS No ph GHS No ph	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply.	Section 2. Hazards Iden nce or Mixture: None ently available data this substance or mixture	tification				
	Label E GHS Based GHS No ph GHS No ph GHS	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa	Section 2. Hazards Iden nce or Mixture: None ently available data this substance or mixture	tification e is not classifiable a				
.2	Label E GHS Based GHS No pr GHS No pr GHS Pleas	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa e refer to Section 7 for	Section 2. Hazards Iden nce or Mixture: None ently available data this substance or mixture I Phrases: Storage and Section 13 for Disposal inform	tification e is not classifiable ad	ccording to GHS.			
.2	Label E GHS GHS Based GHS No ph GHS No ph GHS Pleas Advers	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa e refer to Section 7 for se Human Health	Section 2. Hazards Iden nce or Mixture: None ently available data this substance or mixture I Phrases: r Storage and Section 13 for Disposal inform Naterial may be irritating to the mucous mem	tification e is not classifiable ad ation.	ccording to GHS.			
.2	Label E GHS GHS Based GHS No ph GHS No ph GHS Pleas Advers	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa e refer to Section 7 for se Human Health	Section 2. Hazards Iden nce or Mixture: None ently available data this substance or mixture I Phrases: r Storage and Section 13 for Disposal inform Aaterial may be irritating to the mucous mem May be harmful by inhalation, ingestion, or ske	tification e is not classifiable ad ation. abranes and upper re- kin absorption.	ccording to GHS.			
2	Label E GHS GHS Based GHS No ph GHS No ph GHS Pleas Advers	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa e refer to Section 7 for se Human Health s and Symptoms:	Section 2. Hazards Iden nce or Mixture: None ently available data this substance or mixture I Phrases: r Storage and Section 13 for Disposal inform Material may be irritating to the mucous mem May be harmful by inhalation, ingestion, or sk May cause eye, skin, or respiratory system ir	tification e is not classifiable ad ation. Ibranes and upper re- kin absorption. ritation.	ccording to GHS.			
.2	Label E GHS GHS Based GHS No ph GHS No ph GHS Pleas Advers	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa e refer to Section 7 for se Human Health s and Symptoms:	Section 2. Hazards Iden: nce or Mixture: None ently available data this substance or mixture al Phrases: r Storage and Section 13 for Disposal inform Material may be irritating to the mucous mem May be harmful by inhalation, ingestion, or sk May cause eye, skin, or respiratory system ir To the best of our knowledge, the toxicologic	tification e is not classifiable ad ation. abranes and upper re- kin absorption. ritation. al properties have no	ccording to GHS. spiratory tract. t been thoroughly investigate			
1 2	Label E GHS GHS Based GHS No ph GHS Pleas Advers Effects	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa e refer to Section 7 for se Human Health and Symptoms: Section Section	Section 2. Hazards Iden: nce or Mixture: None ently available data this substance or mixture I Phrases: Storage and Section 13 for Disposal inform Material may be irritating to the mucous mem May be harmful by inhalation, ingestion, or sk May cause eye, skin, or respiratory system ir To the best of our knowledge, the toxicologic on 3. Composition/Information	tification e is not classifiable ad ation. branes and upper re- kin absorption. ritation. al properties have no on on Ingredie	ccording to GHS. spiratory tract. t been thoroughly investigate			
2 3	Label E GHS GHS Based GHS No ph GHS Pleas Advers Effects	Elements: Signal Word: Hazard Phrases: d on evaluation of curr Precaution Phrases: mases apply. Response Phrases: mases apply. Storage and Disposa e refer to Section 7 for se Human Health and Symptoms: Section Section	Section 2. Hazards Iden: nce or Mixture: None ently available data this substance or mixture al Phrases: r Storage and Section 13 for Disposal inform Material may be irritating to the mucous mem May be harmful by inhalation, ingestion, or sk May cause eye, skin, or respiratory system ir To the best of our knowledge, the toxicologic on 3. Composition/Informatic ments (Chemical Name)/ Concentration	tification e is not classifiable ad ation. branes and upper re- kin absorption. ritation. al properties have no on on Ingredie	ccording to GHS. spiratory tract. t been thoroughly investigate			

Multi-region format



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		Section 4. First Aid Measures
4.1	Description of First Aid	
	Measures:	
	In Case of Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
	In Case of Skin Contact:	
	in case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
	In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined
		and tested by medical personnel.
	In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an
	-	unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by
		medical personnel.
		Section 5. Fire Fighting Measures
5.1	Suitable Extinguishing	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
	Media:	Use water spray to cool fire-exposed containers.
	Unsuitable Extinguishing	g A solid water stream may be inefficient.
	Media:	
5.2	Flammable Properties an	IdNo data available.
	Hazards:	
		No data available.
	Flash Pt:	No data.
	Explosive Limits:	LEL: No data. UEL: No data.
	Autoignition Pt:	No data.
5.3	Fire Fighting Instructions	s: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
		Section 6. Accidental Release Measures
6.1	Protective Precautions,	Avoid raising and breathing dust, and provide adequate ventilation.
	Protective Equipment an	d As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,
	Emergency Procedures:	and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
6.2	Environmental	Take steps to avoid release into the environment, if safe to do so.
	Precautions:	
6.3		r Contain spill and collect, as appropriate.
		ngTransfer to a chemical waste container for disposal in accordance with local regulations.
	Up:	
		Section 7. Handling and Storage
7.1	Precautions To Be Taker	n Avoid breathing dust/fume/gas/mist/vapours/spray.
	in Handling:	Avoid prolonged or repeated exposure.
7.2	Precautions To Be Taker	n Keep container tightly closed.
	in Storing:	Store in accordance with information listed on the product insert.
	Sec	tion 8. Exposure Controls/Personal Protection
8.1	Exposure Parameters:	

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Exposure Controls:						
Engineering Controls	ocess enclosures, local exhaust ventilation, or other engineering controls to control airborne					
(Ventilation etc.):	levels below recommended exposure limits.					
Personal protection equip	ment:					
Eye Protection: Safety glasses						
Protective Gloves:	Compatible chemical-resistant gloves					
Other Protective Clothing:Lab coat						
-	H approved respirator, as conditions warrant.					
Work/Hygienic/Maintenan Do not take internally.						
	Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.					
	Wash thoroughly after handling.					
	No data available.					
Se	ection 9. Physical and Chemical Properties					
Information on Basic Physi	ical and Chemical Properties					
Physical States:	[]Gas [X]Liquid []Solid					
Appearance and Odor:	A liquid					
pH:	No data.					
Melting Point:	No data.					
Boiling Point:	No data.					
Flash Pt:	No data.					
Evaporation Rate:	No data.					
Flammability (solid, gas):	No data available.					
Explosive Limits:	LEL: No data. UEL: No data.					
Vapor Pressure (vs. Air or	mm No data.					
Hg):						
Vapor Density (vs. Air = 1)	: No data.					
Specific Gravity (Water = 1): No data.					
Solubility in Water:	No data.					
Solubility Notes:	0.5 mg/ml in a 1:1 solution of EtOH:PBS (pH 7.2); ~10 mg/ml in EtOH & DMF; soluble					
	(slightly) in: chloroform;					
Octanol/Water Partition	No data.					
Coefficient:						
Autoignition Pt:	No data.					
Decomposition Temperatu	ire: No data.					
Viscosity:	No data.					
Other Information						
Percent Volatile:	No data.					
Molecular Formula & Weig	ht: C57H102O6 883.4					
	Engineering Controls (Ventilation etc.): Personal protection equip Eye Protection: Protective Gloves: Other Protective Clothing: Respiratory Equipment (Specify Type): Work/Hygienic/Maintenan ce Practices: Nork/Hygienic/Maintenan ce Practices: Nork/Hygienic/Maintenan ce Practices: Nork/Hygienic/Maintenan ce Practices: Nelting Point: Boiling Point: Boiling Point: Flash Pt: Evaporation Rate: Flammability (solid, gas): Explosive Limits: Vapor Pressure (vs. Air or Hg): Vapor Density (vs. Air = 1) Specific Gravity (Water = 1 Solubility in Water: Solubility in Water: Solubility Notes: Octanol/Water Partition Coefficient: Autoignition Pt: Decomposition Temperatu Viscosity: Other Information					

Multi-region format



Multi-region format

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			Section 10. Stability a	ind Reactiv	vity			
10.1	Reactivi	ty:	No data available.					
10.2	Stability	:	Unstable [] Stable [X]					
Polymerization:Will o10.4Conditions To Avoid:No da10.5Incompatibility - Materials oxidiz			Stable if stored in accordance with information listed on the product insert. Will occur [] Will not occur [X]					
			s oxidizing agents					
				To Avoi	d:			
10.6	Hazardous Decomposition or Byproducts:		carbon dioxide					
			carbon monoxide					
			Section 11. Toxicologie	cal Informa	ation			
11.1	Informa	tion on	The toxicological effects of this produc	ct have not been	n thoroughly st	udied.		
	Toxicol	ogical Effects:						
CAS	#	Hazardous Com	ponents (Chemical Name)	NTP	IARC	ACGIH	OSHA	
219	0-18-3	1,3-Dilinoleoyl-2-	Stearoyl-rac-glycerol	n.a.	n.a.	n.a.	n.a.	
						1		
		•	Section 12 Ecologics	al Informati	ion	•		
12 1	Toxicity		Section 12. Ecologica	al Informati	ion	•	•	
12.1	Toxicity	:	Avoid release into the environment.			·	•	
	-		Avoid release into the environment. Runoff from fire control or dilution wat				-	
12.1 12.2	Persiste	nce and	Avoid release into the environment.				-	
	Persiste Degrada	nce and	Avoid release into the environment. Runoff from fire control or dilution wat			·		
12.2	Persiste Degrada	nce and ability: mulative	Avoid release into the environment. Runoff from fire control or dilution wat No data available.			·	-	
12.2	Persiste Degrada Bioaccu	ence and ability: imulative il:	Avoid release into the environment. Runoff from fire control or dilution wat No data available.					
12.2 12.3	Persiste Degrada Bioaccu Potentia Mobility	ence and ability: imulative il: in Soil:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available.					
12.2 12.3 12.4	Persiste Degrada Bioaccu Potentia Mobility	ence and ability: imulative il: in Soil: of PBT and vPvB	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available.					
12.2 12.3 12.4	Persiste Degrada Bioaccu Potentia Mobility Results assessr	ence and ability: imulative il: in Soil: of PBT and vPvB	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available.					
12.2 12.3 12.4 12.5	Persiste Degrada Bioaccu Potentia Mobility Results assessr	ence and ability: mulative al: in Soil: of PBT and vPvB ment:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available.	er may cause po	ollution.			
12.2 12.3 12.4 12.5	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ac	ence and ability: mulative al: in Soil: of PBT and vPvB nent: dverse effects:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C	er may cause po Considerati	ollution.			
12.2 12.3 12.4 12.5 12.6	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ac	ence and ability: mulative al: in Soil: of PBT and vPvB ment:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ac	ence and ability: mulative al: in Soil: of PBT and vPvB nent: dverse effects:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6 13.1 14.1	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ad	ence and ability: imulative al: in Soil: of PBT and vPvB nent: dverse effects: Disposal Method:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D	Persiste Degrada Bioaccu Potentia Mobility Results assess Other ac Waste D LAND T	ence and ability: imulative al: in Soil: of PBT and vPvB nent: dverse effects: Disposal Method: RANSPORT (US I	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ad Waste D LAND T DOT Prope	ence and ability: imulative al: in Soil: of PBT and vPvB nent: dverse effects: Disposal Method: RANSPORT (US I er Shipping Name: d Class:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ad Waste D LAND T DOT Prope	ence and ability: imulative al: in Soil: of PBT and vPvB nent: dverse effects: Disposal Method: RANSPORT (US I er Shipping Name: d Class: nber:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo Dot): Not dangerous goods.	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U 14.1	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ac Waste D UNNA Nur LAND T	ence and ability: mulative al: in Soil: of PBT and vPvB nent: dverse effects: Disposal Method: RANSPORT (US I er Shipping Name: d Class: nber: RANSPORT (Euro	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo DOT): Not dangerous goods.	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U 14.1 A	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ac Waste D UNNA Nur LAND T	ence and ability: imulative al: in Soil: of PBT and vPvB nent: dverse effects: visposal Method: rRANSPORT (US I er Shipping Name: d Class: nber: rRANSPORT (Euro hipping Name:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo Dot): Not dangerous goods.	er may cause po Considerati e, and federal re	iONS			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U 14.1 A U	Persiste Degrada Bioaccu Potentia Mobility Results assessr Other ad Waste D LAND T DOT Prope DOT Hazar	ence and ability: imulative al: in Soil: of PBT and vPvB nent: dverse effects: bisposal Method: r Shipping Name: d Class: nber: rRANSPORT (Euro hipping Name: r:	Avoid release into the environment. Runoff from fire control or dilution wat No data available. No data available. No data available. No data available. No data available. Section 13. Disposal C Dispose in accordance with local, stat Section 14. Transpo DOT): Not dangerous goods.	er may cause po Considerati e, and federal re	iONS			



14.3 AIR TRANSPORT (ICAO/IATA)	
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ICAO/IATA Shipping Name: Not dangerous goods.

Transport in accordance with local, state, and federal regulations.

Information:

Additional Transport

Section 15. Regulatory Information

CAS #	Hazardous Components (Chemical Name)		S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
2190-18-3	1,3-Dilinoleoyl-2-Stearoyl-rac-glycerol		No	No	No	
CAS #	Hazardous Components (Chemical Name)		Other US EPA or	· State Lists	•	
2190-18-3	1,3-Dilinoleoyl-2-Stearoyl-rac-glycerol		CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No			
Regulatory Information Statement:		This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.				
		Section 16. Ot	her Informatio	on		
Revision Date:		04/27/2019				
Additional Info	ormation About	No data available.				
This Product:						
Company Policy or Disclaimer:		DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.				