

		according to	Regulation (EC) No. 1907/2006 as a	mended by (EC) No. 2015/8	330 and US OSHA HCS	2015
		Section 1. Ide	entification of the Substar	nce/Mixture and of t	the Company/Ur	ndertaking
1.1	Product Product Synony	Name:	28548 1,2-Dioleoyl-3-Lauroyl-ra 9Z-octadecenoic acid 1,1 1,2-Olein-3-Laurin; TG(1	'-[1-[[(1-oxododecyl)	ioxy]methyl]-1,2-e	thanediyl] ester;
1.2	Relevar	t identified uses of t	he substance or mixture a	and uses advised ag	gainst:	
	Releva	ant identified uses:	For research use only, no	ot for human or veter	rinary use.	
1.3	Details	of the Supplier of the	Safety Data Sheet:			
	Comp	any Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	pany		
	Web s	ite address:	www.caymanchem.com			
	Inform	nation:	Cayman Chemical Comp	pany	+1 (734	4)971-3335
1.4	-	ncy telephone numb gency Contact:	er: CHEMTREC Within USA CHEMTREC Outside US		-	0)424-9300 3)527-3887
			Section 2. Haz	zards Identific	cation	
2.1	Classifi	cation of the Substar	nce or Mixture:			
2.2	Label E	lements:				
2.3	Based GHS I No ph GHS I No ph GHS S Please Advers	Precautionary Phrase rases apply. Response Phrases: rases apply. Storage and Disposal e refer to Section 7 for e Human Health M and Symptoms: M	I Phrases: Storage and Section 13 for laterial may be irritating to t lay be harmful by inhalation lay cause eye, skin, or resp	Disposal informatior he mucous membran , ingestion, or skin al iratory system irritatio	n. nes and upper res bsorption. on.	-
		Sectio	n 3. Composition	/Information of	on Ingredie	nts
CAS RTE	6 # / CS #	Hazardous Components (Chemical Name)/ REACH Registration No.		Concentration	EC No./ EC Index No.	GHS Classification
401 NA	16-52-8	1,2-Dioleoyl-3-Lauroyl-r	ac-glycerol	100.0 %	NA NA	No data available.

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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:	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					
	2	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	A solid water stream may be inefficient.					
	Media:						
5.2	Flammable Properties an	dNo 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	: 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.					
		d As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).					
	Emergency Procedures:						
6.2	Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.					
6.2		r Contain shill and collect, as annropriate					
6.3		Methods and Material For Contain spill and collect, as appropriate. Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.					
	Up:						
	-F.	Section 7. Handling and Storage					
 7.1	Procautions To Be Taken	Avoid breathing dust/fume/gas/mist/vapours/spray.					
'···	in Handling:	Avoid prolonged or repeated exposure.					
7.2		Keep container tightly closed.					
	in Storing:	Store in accordance with information listed on the product insert.					
—							
		tion 8. Exposure Controls/Personal Protection					
8.1	Exposure Parameters:						
8.2	Exposure Controls:						
8.2.1	Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.					

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	(Ventilation etc.):							
8.2.2	Personal protection equipment:							
	Eye Protection: Safe	ty glasses						
	Protective Gloves: Com	mpatible chemical-resistant gloves						
	Other Protective Clothing:Lab coat							
	Respiratory Equipment NIOSH approved respirator, as conditions warrant.							
	(Specify Type):							
	Work/Hygienic/Maintenan Do not take internally.							
	ce Practices: Facil	ties storing or utilizing this material should be equipped with an eyewash and a safety shower.						
	Was	n thoroughly after handling.						
	No d	ata available.						
	Section	on 9. Physical and Chemical Properties						
9.1	Information on Basic Physical a	and Chemical Properties						
	Physical States:	[]Gas [X]Liquid []Solid						
	Appearance and Odor:	An oil						
	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 Temperature:	No data.						
	Viscosity:	No data.						
9.2	Other Information							
	Percent Volatile:	No data.						
	Molecular Formula & Weight:	C51H94O6 803.3						
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			Section 10. Stability	and Reactiv	vity			
10.1	Reactivit	ty:	No data available.					
10.2	Stability	:	Unstable [] Stable [X]					
10.3 Stability Note(s):			Stable if stored in accordance with i	nformation listed of	on the product	insert.		
	Polymer	ization:	Will occur [] Will not occur [X]				
10.4	Conditio	ons To Avoid:	No data available.					
10.5	Incompa	tibility - Materials	oxidizing agents					
	To Avoid: Hazardous		carbon dioxide					
10.6								
	Decomposition or		carbon monoxide					
	Byprodu	icts:						
			Section 11. Toxicolog	ical Informa	ation			
11.1	Informat	ion on	The toxicological effects of this prod	uct have not beer	n thoroughly st	udied.		
	Toxicolo	gical Effects:						
CAS	#	Hazardous Com	ponents (Chemical Name)	NTP	IARC	ACGIH	OSHA	
401	6-52-8	1,2-Dioleoyl-3-La	uroyl-rac-glycerol	n.a.	n.a.	n.a.	n.a.	
		•	Section 12 Ecologic	al Informat	ion	•		
12 1	Toxicity		Section 12. Ecologic	al Informat	ion	•	•	
12.1	Toxicity:	· ·	Avoid release into the environment.			·		
	-		Avoid release into the environment. Runoff from fire control or dilution w					
12.1	Persiste	nce and	Avoid release into the environment.			·		
	-	nce and bility:	Avoid release into the environment. Runoff from fire control or dilution w			·	·	
12.2	Persiste Degrada	nce and bility: mulative	Avoid release into the environment. Runoff from fire control or dilution w No data available.			·		
12.2	Persiste Degrada Bioaccu	nce and bility: mulative I:	Avoid release into the environment. Runoff from fire control or dilution w No data available.					
12.2 12.3	Persiste Degrada Bioaccu Potentia Mobility	nce and bility: mulative I: in Soil:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available.				·	
12.2 12.3 12.4	Persiste Degrada Bioaccu Potentia Mobility	nce and bility: mulative I: in Soil: of PBT and vPvB	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available.				·	
12.2 12.3 12.4	Persiste Degrada Bioaccu Potentia Mobility Results assessm	nce and bility: mulative I: in Soil: of PBT and vPvB	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available.				·	
12.2 12.3 12.4 12.5	Persiste Degrada Bioaccu Potentia Mobility Results assessm	nce and bility: mulative I: in Soil: of PBT and vPvB nent:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available.	ater may cause po	ollution.			
12.2 12.3 12.4 12.5	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative I: in Soil: of PBT and vPvB nent:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available.	ater may cause po	ollution.			
12.2 12.3 12.4 12.5 12.6	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative I: in Soil: of PBT and vPvB nent: Iverse effects:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative l: in Soil: of PBT and vPvB nent: lverse effects: isposal Method:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6 13.1	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D	nce and bility: mulative I: in Soil: of PBT and vPvB nent: Iverse effects: isposal Method:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6 13.1 14.1	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND Th OT Proper	nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US D	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D0	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND TR OT Proper	nce and bility: mulative I: in Soil: of PBT and vPvB nent: Iverse effects: isposal Method: RANSPORT (US D Shipping Name: d Class:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D0 U1	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND TH OT Proper OT Hazaro	nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US D r Shipping Name: d Class:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo POT): Not dangerous goods.	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D(UI 14.1	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND TH OT Proper OT Hazard N/NA Num	nce and bility: mulative I: in Soil: of PBT and vPvB nent: Iverse effects: isposal Method: RANSPORT (US D Shipping Name: d Class: nber: RANSPORT (Euro	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo POT): Not dangerous goods.	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 D0 U1 14.1 A1	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND TH OT Proper OT Hazard N/NA Num	nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US D r Shipping Name: d Class: hber: RANSPORT (Euro hipping Name:	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo POT): Not dangerous goods.	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			
12.2 12.3 12.4 12.5 12.6 13.1 14.1 DC UI 14.1 UI	Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND TH OT Proper OT Hazaro N/NA Num LAND TH	nce and bility: mulative I: in Soil: of PBT and vPvB nent: Iverse effects: isposal Method: RANSPORT (US D Shipping Name: d Class: nber: RANSPORT (Euro nipping Name: :	Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal Dispose in accordance with local, st Section 14. Transpo POT): Not dangerous goods.	ater may cause po Considerati ate, and federal re	ollution. iONS egulations.			

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14.3 AIR TR	ANSPORT (ICAO/I	ATA):				
ICAO/IATA Shipping Name:		Not dangerous goods.				
UN Number:		Packing Group:				
Hazard Cla	iss:					
Additional Tra	ansport	Transport in accordance with local, state, and federal regulations.				
Information:						
		Section 15. Regu	latory Informa	ation		
EPA SARA (S	uperfund Amendn	nents and Reauthorization Act	of 1986) Lists			
CAS #	Hazardous Com	ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
4016-52-8	1,2-Dioleoyl-3-La	uroyl-rac-glycerol	No	No	No	
CAS #	Hazardous Com	ponents (Chemical Name)	Other US EPA or	State Lists		
4016-52-8	1,2-Dioleoyl-3-Lauroyl-rac-glycerol		CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No			
Regulatory Inf	ormation	This SDS was prepared in acco	ordance with 29 CFR	R 1910.1200 and Regu	lation (EC)	
Statement:		No.1272/2008.				
		Section 16. Oth	ner Informatio	n		
Revision Date:		11/02/2019				
Additional Info	ormation About	No data available.				
This Product:						
Company Policy or Disclaimer:		DISCLAIMER: This information currently available to us. However express or implied, with respect use. Users should make their of their particular purposes.	ver, we make no war t to such information	ranty of merchantabilit , and we assume no lia	y or any other warranty, ability resulting from its	