

Revision: 03/31/2018

		arroun		7/2006 as amended by	$v \in U$ in U , $1272/200$		
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		Section 1. Ide	ntification of the Substan	ice/IVIIxture and of	the Company/UI	ndertaking	
.1	Product C		24386				
	Product N		C2 L-threo Ceramide (d1	-			
	Synonyms	S:	N-[(1S,2S,3E)-2-hydroxy			-	
			N-acetyl-L-threo-Sphingc			Ceramide (d18:1/2:0);	
.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	Details of	the Supplier of the	Safety Data Sheet:				
	Compan	y Name:	Cayman Chemical Comp	any			
			1180 E. Ellsworth Rd.				
	Woh cito	address:	Ann Arbor, MI 48108 www.caymanchem.com				
	Informat		Cayman Chemical Comp	any	±1 (73)	4)971-3335	
				any	+1 (73-	+)97 1-3333	
.4	-	cy telephone numbe ncy Contact:	CHEMTREC Within USA	and Canada:	1 (80	0)424-9300	
	Emerger	ncy contact.	CHEMTREC Outside US		-	3)527-3887	
						0,021 0001	
			Section 2. Haz	zards Identifi	cation		
2.1	Classificat	tion of the Substan	ce or Mixture:				
	Classificat Label Elen		ce or Mixture:				
2.1 2.2	Label Elen		ce or Mixture: None				
	Label Elen GHS Sig	ments:					
	Label Elen GHS Sig GHS Ha:	ments: Inal Word: zard Phrases:		stance or mixture is	not classifiable ac	cording to GHS.	
	Label Elen GHS Sig GHS Haz Based or	ments: Inal Word: zard Phrases:	None	stance or mixture is	not classifiable ac	cording to GHS.	
	Label Elem GHS Sig GHS Haz Based or GHS Pre	ments: Inal Word: zard Phrases: n evaluation of curre	None	stance or mixture is	not classifiable ac	cording to GHS.	
	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras	ments: jnal Word: zard Phrases: n evaluation of curre ecaution Phrases:	None	stance or mixture is	not classifiable ac	cording to GHS.	
	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res	ments: ynal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply.	None	stance or mixture is	not classifiable ac	cording to GHS.	
	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res No phras	ments: jnal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases:	None ntly available data this subs	stance or mixture is	not classifiable ac	cording to GHS.	
	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res GHS Sto	ments: jnal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases: ses apply. brage and Disposal	None ntly available data this subs			cording to GHS.	
2.2	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res GHS Res GHS Sto Please re	ments: ynal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases: ses apply. brage and Disposal efer to Section 7 for	None ntly available data this subs Phrases:	Disposal informatio	n.		
	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res No phras GHS Sto Please re Adverse H	ments: ynal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases: ses apply. brage and Disposal efer to Section 7 for Human Health M	None ntly available data this subs Phrases: Storage and Section 13 for	Disposal informatio ne mucous membra	n. nes and upper res		
2.2	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res No phras GHS Sto Please re Adverse H	ments: ynal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases: ses apply. orage and Disposal efer to Section 7 for Human Health M nd Symptoms: M	None ntly available data this subs Phrases: Storage and Section 13 for aterial may be irritating to th	Disposal informatio ne mucous membra , ingestion, or skin a	n. nes and upper res ibsorption.		
2.2	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res No phras GHS Sto Please re Adverse H	ments: ynal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases: ses apply. brage and Disposal efer to Section 7 for Human Health M nd Symptoms: M M	None ntly available data this subs Phrases: Storage and Section 13 for aterial may be irritating to th ay be harmful by inhalation ay cause eye, skin, or resp	Disposal informatio ne mucous membra , ingestion, or skin a iratory system irritat	n. nes and upper res ibsorption. ion.		
2.2	Label Elem GHS Sig GHS Haz Based or GHS Pre No phras GHS Res No phras GHS Sto Please re Adverse H	ments: jnal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases: ses apply. orage and Disposal efer to Section 7 for Human Health M nd Symptoms: M M To	None ntly available data this subs Phrases: Storage and Section 13 for aterial may be irritating to th ay be harmful by inhalation ay cause eye, skin, or resp	Disposal informatio ne mucous membra , ingestion, or skin a iratory system irritat e, the toxicological pr	n. nes and upper res ibsorption. ion. roperties have not	piratory tract.	
2.2 2.3	Label Elen GHS Sig GHS Haz Based or GHS Pre No phras GHS Res No phras GHS Sto Please re Adverse H Effects ar	ments: jnal Word: zard Phrases: n evaluation of curre ecaution Phrases: ses apply. sponse Phrases: ses apply. orage and Disposal efer to Section 7 for Human Health M nd Symptoms: M M To Section	None ntly available data this subs Phrases: Storage and Section 13 for aterial may be irritating to th ay be harmful by inhalation ay cause eye, skin, or resp the best of our knowledge of the best of our knowledge of the best of our knowledge	Disposal informatio ne mucous membra , ingestion, or skin a iratory system irritat e, the toxicological pr	n. nes and upper res ibsorption. ion. roperties have not	piratory tract.	



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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 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 Media:	g A solid water stream may be inefficient.
5.2	Flammable Properties an Hazards:	IdNo data available.
		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 6.2	Emergency Procedures: Environmental	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). 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	Avoid breathing dust/fume/gas/mist/vapours/spray.
	in Handling:	Avoid prolonged or repeated exposure.
7.2	Precautions To Be Taker	Neep 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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8.2.1 E (8.2.2 I F (F	(Ventilation etc.):levelPersonal protection equipmerEye Protection:SafeProtective Gloves:ConOther Protective Clothing:LabRespiratory EquipmentNIO(Specify Type):Work/Hygienic/Maintenan Dom	ety glasses npatible chemical-resistant gloves coat SH approved respirator, as conditions warrant.			
(8.2.2 F ((\ \	(Ventilation etc.):levelPersonal protection equipmerEye Protection:SafeProtective Gloves:ConOther Protective Clothing:LabRespiratory EquipmentNIO(Specify Type):Work/Hygienic/Maintenan Dom	els below recommended exposure limits. nt: ety glasses npatible chemical-resistant gloves coat ISH approved respirator, as conditions warrant.			
8.2.2 F () ()	Personal protection equipmer Eye Protection: Safe Protective Gloves: Con Other Protective Clothing:Lab Respiratory Equipment NIO (Specify Type): Work/Hygienic/Maintenan Doi	nt: ety glasses npatible chemical-resistant gloves coat SH approved respirator, as conditions warrant.			
F () ())	Eye Protection:SafeProtective Gloves:ConOther Protective Clothing:LabRespiratory EquipmentNIO(Specify Type):Work/Hygienic/Maintenan	ety glasses npatible chemical-resistant gloves coat SH approved respirator, as conditions warrant.			
F () ()	Protective Gloves: Con Other Protective Clothing:Lab Respiratory Equipment NIO (Specify Type): Work/Hygienic/Maintenan Do	npatible chemical-resistant gloves coat SH approved respirator, as conditions warrant.			
(Other Protective Clothing:Lab Respiratory Equipment NIO (Specify Type): Work/Hygienic/Maintenan Do	coat SH approved respirator, as conditions warrant.			
F (\	Respiratory Equipment NIO (Specify Type): Work/Hygienic/Maintenan Do	SH approved respirator, as conditions warrant.			
(V	(Specify Type): Work/Hygienic/Maintenan Do				
\	Work/Hygienic/Maintenan Do				
	ce Practices: Fac	t take internally.			
		ilities storing or utilizing this material should be equipped with an eyewash and a safety showe			
	Was	sh thoroughly after handling.			
	No	data available.			
	Secti	on 9. Physical and Chemical Properties			
9.1 Ir	nformation on Basic Physical				
F	Physical States:	[]Gas []Liquid [X]Solid			
	Appearance and Odor:	A solid			
F	pH:	No data.			
r	Melting Point:	No data.			
E	Boiling Point:	No data.			
	Flash Pt:	No data.			
E	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:	~5 mg/ml EtOH, chloroform, DMSO, DMF;			
	Octanol/Water Partition	No data.			
(Coefficient:				
	Autoignition Pt:	No data.			
	Decomposition Temperature:	No data.			
	Viscosity:	No data.			
	Other Information				
F	Percent Volatile:	No data.			
r	Molecular Formula & Weight:	C20H39NO3 341.5			



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			Section 10. Stability	and Reactive	vity			
10.1	Reactivi	ty:	No data available.					
10.2	Stability	:	Unstable [] Stable [X]					
10.3	Stability	Note(s):	Stable if stored in accordance with information listed on the product insert.					
	Polymer	ization:	Will occur [] Will not occur [X] No data available.					
10.4	Conditio	ns To Avoid:						
10.5	Incompa	tibility - Materials	No data available.					
	To Avoid:							
10.6	Hazardous		carbon dioxide					
	Decomp	osition or	carbon monoxide					
	Byproducts:		nitrogen oxides					
			Section 11. Toxicolog	gical Informa	ation			
11.1	Informat	ion on	The toxicological effects of this proc	duct have not beer	n thoroughly st	udied.		
	Toxicolo	gical Effects:						
CAS	#	Hazardous Com	ponents (Chemical Name)	NTP	IARC	ACGIH	OSHA	
1436	15-69-4							
	10-00-4	C2 L-threo Ceram	nide (d18:1/2:0)	n.a.	n.a.	n.a.	n.a.	
	10-03-4	C2 L-threo Ceram				n.a.	n.a.	
			Section 12. Ecologi	cal Informat		n.a.	n.a.	
12.1	Toxicity		Section 12. Ecologie Avoid release into the environment.	cal Informati	ion	n.a.	n.a.	
12.1	Toxicity	<u> </u>	Section 12. Ecologie Avoid release into the environment. Runoff from fire control or dilution w	cal Informati	ion	n.a.	n.a.	
	Toxicity: Persiste	nce and	Section 12. Ecologie Avoid release into the environment.	cal Informati	ion	n.a.	n.a.	
12.1 12.2	Toxicity: Persiste Degrada	nce and bility:	Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available.	cal Informati	ion	n.a.	n.a.	
12.1	Toxicity: Persiste	nce and bility: mulative	Section 12. Ecologie Avoid release into the environment. Runoff from fire control or dilution w	cal Informati	ion	n.a.	n.a.	
12.1 12.2 12.3	Toxicity: Persiste Degrada Bioaccu Potentia	nce and bility: mulative I:	Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available.	cal Informati	ion	n.a.	n.a.	
12.1 12.2 12.3 12.4	Toxicity: Persiste Degrada Bioaccu Potentia Mobility	nce and bility: mulative I: in Soil:	Section 12. Ecologie Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available.	cal Informati	ion	n.a.	n.a.	
12.1 12.2 12.3	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results	nce and bility: mulative I: in Soil: of PBT and vPvB	Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available.	cal Informati	ion	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm	nce and bility: mulative I: in Soil: of PBT and vPvB nent:	Section 12. Ecologie Avoid release into the environment. Runoff from fire control or dilution w No data available. No data available. No data available. No data available.	cal Informati	ion	n.a.	n.a.	
12.1 12.2 12.3 12.4	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm	nce and bility: mulative I: in Soil: of PBT and vPvB	Section 12. Ecologie 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.	cal Informati	I ollution.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative I: in Soil: of PBT and vPvB hent: Iverse effects:	Section 12. Ecologie 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	cal Information	ion ollution.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative I: in Soil: of PBT and vPvB nent:	Section 12. Ecologie 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	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative I: in Soil: of PBT and vPvB hent: Iverse effects:	Section 12. Ecologie 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	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative I: in Soil: of PBT and vPvB hent: Iverse effects:	Section 12. Ecologie 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, s	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative l: in Soil: of PBT and vPvB nent: lverse effects:	Section 12. Ecologie 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, s Section 14. Transp	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad	nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name:	Section 12. Ecologie 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, s Section 14. Transp	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D D	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND T	nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class:	Section 12. Ecologie 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, s Section 14. Transp	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D D	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND T OT Prope OT Hazard	nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class:	Section 12. Ecologie 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, s Section 14. Transp DOT): Not dangerous goods.	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U 14.1	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND T OT Prope OT Hazard N/NA Nun LAND T	nce and bility: mulative l: in Soil: of PBT and vPvB nent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class: nber:	Section 12. Ecologie 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, s Section 14. Transp DOT): Not dangerous goods.	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	
12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U 14.1 A U	Toxicity: Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ad Waste D LAND T OT Prope OT Hazard N/NA Nun LAND T	nce and bility: mulative l: in Soil: of PBT and vPvB nent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class: nber: RANSPORT (Euro hipping Name: r:	Section 12. Ecologie Avoid release into the environment. Runoff from fire control or dilution will 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, s Section 14. Transp DOT): Not dangerous goods.	cal Information vater may cause por vater may cause por vater, and federal re	ion ollution. ions egulations.	n.a.	n.a.	



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14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name:

Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

Section 15. Regulatory Information

CAS #	Hazardous Components (Chemical Name)		S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
143615-69-4	C2 L-threo Ceramide (d18:1/2:0)		No	No	No	
CAS #	Hazardous Components (Chemical Name)		Other US EPA or	· State Lists	•	
143615-69-4	C2 L-threo Ceramide (d18:1/2:0)		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:		03/31/2018				
Additional Information 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.				