

Revision: 04/01/2015 Supersedes Revision: 03/15/2010

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008								
	Section 1. Identification of the Substance/Mixture and of the Company/Undertaking							
1.1	Product Code:	10012545						
	Product Name:	SIRT3 Direct Developer						
.2	Relevant identified uses o	f the substance or mixture and uses advised aga	ainst:					
	Relevant identified uses	For research use only, not for human or veterin	ary use.					
.3	Details of the Supplier of the Safety Data Sheet:							
	Company Name:	Cayman Chemical Company						
		1180 E. Ellsworth Rd. Ann Arbor, MI 48108						
	Web site address:	www.caymanchem.com						
	Information:	Cayman Chemical Company	+1 (734)971-3335					
			+1 (734)371-3333					
.4	Emergency telephone nur	nder: CHEMTREC Within USA and Canada:	1 (800) 424 0200					
	Emergency Contact:	CHEMTREC Outside USA and Canada.	+1 (800)424-9300 +1 (703)527-3887					
		Section 2. Hazards Identifica	ation					
.1	<b>Classification of the Subs</b>	tance or Mixture:						
.1.1	Classification according	to Regulation (EC) No 1272/2008 [CLP]:						
	-							
	Skin Corrosion/Irritation, Category 2 Serieus Fue Demone/Fue Irritation, Category 2							
	Serious Eye Damage/Eye Irritation, Category 2							
	Respiratory Sensitizatio	n, Category 1						
	Respiratory Sensitizatio Specific Target Organ T							
	Respiratory Sensitizatio Specific Target Organ T Label Elements:	n, Category 1 oxicity (single exposure), Category 3						
2.2 2.2.1	Respiratory Sensitizatio Specific Target Organ T Label Elements:	n, Category 1						
	Respiratory Sensitizatio Specific Target Organ T Label Elements:	n, Category 1 oxicity (single exposure), Category 3						
	Respiratory Sensitizatio Specific Target Organ T Label Elements:	n, Category 1 oxicity (single exposure), Category 3						
	Respiratory Sensitizatio Specific Target Organ T Label Elements:	n, Category 1 oxicity (single exposure), Category 3						
	Respiratory Sensitizatio Specific Target Organ T Label Elements: Labeling according to Re	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]:						
	Respiratory Sensitizatio Specific Target Organ T Label Elements:	n, Category 1 oxicity (single exposure), Category 3						
	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases:	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger						
	Respiratory Sensitizatio Specific Target Organ T Label Elements: Labeling according to Re GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger						
	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Res Construction of the sense GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious even	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger	əd					
	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Re Construction of the sense GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious eye H334: May cause allergy	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale	əd.					
	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Res Construction GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious even H334: May cause allergy H335: May cause respirat	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale ory irritation.	əd.					
	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Res Construction GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious even H334: May cause allergy H335: May cause respirate GHS Precaution Phrases	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale ory irritation. s:	ed.					
	Respiratory Sensitizatio Specific Target Organ T Label Elements: Labeling according to Re GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio H319: Causes serious eye H334: May cause allergy H335: May cause respirat GHS Precaution Phrases P261: Avoid breathing {du	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale tory irritation. s: ust/fume/gas/mist/vapors/spray}.	ed.					
	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Res Construction GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious even H334: May cause allergy H335: May cause respiration GHS Precaution Phrases P261: Avoid breathing {du P264: Wash {hands} thore	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale tory irritation. s: ust/fume/gas/mist/vapors/spray}. oughly after handling.						
	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Rest Construction of the sense of the signal Word: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious eye H334: May cause allergy H335: May cause respirate GHS Precaution Phrases P261: Avoid breathing (du P264: Wash {hands} thorow P280: Wear {protective gl	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale ory irritation. s: ust/fume/gas/mist/vapors/spray}. bughly after handling. oves/protective clothing/eye protection/face protection						
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	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Rest Construction GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious eye H334: May cause allergy H335: May cause respirate GHS Precaution Phrases P261: Avoid breathing (du P264: Wash {hands} thorow P280: Wear {protective gl P285: In case of inadequate GHS Response Phrases	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale tory irritation. s: ust/fume/gas/mist/vapors/spray}. bughly after handling. oves/protective clothing/eye protection/face protection ate ventilation wear respiratory protection.						
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	Respiratory Sensitization Specific Target Organ T Label Elements: Labeling according to Rest Construction of the sense GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H319: Causes serious eye H334: May cause allergy H335: May cause allergy H335: May cause respirate GHS Precaution Phrases P261: Avoid breathing {du P264: Wash {hands} thorow P280: Wear {protective gl P280: Wear {protective gl P302+352: IF ON SKIN: W P304+340: IF INHALED: P341: If breathing is diffici	n, Category 1 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger on. e irritation. or asthma symptoms or breathing difficulties if inhale ory irritation. s: ust/fume/gas/mist/vapors/spray}. oughly after handling. oves/protective clothing/eye protection/face protection ate ventilation wear respiratory protection. : Wash with plenty of soap and water. Remove victim to fresh air and keep at rest in a position	on}. tion comfortable for breathing. comfortable for breathing.					
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P312: Call a POISON CENTER or doctor/physician if you feel unwell. P332+313: If skin irritation occurs, get medical advice/attention. Revision: 04/01/2015 Supersedes Revision: 03/15/2010

P337+313: If eye irritation persists, get medical advice/attention. P342+311: If experiencing respiratory symptoms call a POISON CENTER or doctor/physician. P362: Take off contaminated clothing and wash before re-use. **GHS Storage and Disposal Phrases:** Please refer to Section 7 for Storage and Section 13 for Disposal information. 2.3 Adverse Human Health Causes eye and serious skin irritation. Material may be irritating to the mucous membranes and upper respiratory tract. Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory system irritation. To the best of our knowledge, the toxicological properties have not been thoroughly investigated. Section 3. Composition/Information on Ingredients CAS#/ Hazardous Components (Chemical Name)/ Concentration EC No./ **GHS Classification RTECS #** EC Index No. **REACH Registration No.** NA SIRT3 Direct Developer 100.0 % NA Skin Corr. 2: H315 NA NA Eye Damage 2: H319 Resp. Sens. 1: H334 STOT (SE) 3: H335 H336 Section 4. First Aid Measures 4.1 **Description of First Aid** No data available. 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. Wash out mouth with water provided person is conscious. Never give anything by mouth to an In Case of Ingestion: 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. Use water spray to cool fire-exposed containers. Media: Unsuitable Extinguishing A solid water stream may be inefficient. Media: 5.2 Flammable Properties and No data available. Hazards: 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.

Multi-region format



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			Section 6. Ac	cidental Release Me	easures	
6.1	Protecti	ve Precautions,	Avoid raising and bre	athing dust, and provide adeq	uate ventilation.	
	Protecti	ve Equipment an	d As conditions warran	t, wear a NIOSH approved sel	f-contained breathing appara	atus, or respirator,
	Emerge	ncy Procedures:	and appropriate pers	onal protection (rubber boots,	safety goggles, and heavy ru	ubber gloves).
6.2	Environ	mental	Take steps to avoid r	elease into the environment, if	safe to do so.	
	Precaut	ions:				
6.3			r Contain spill and coll			
		ment and Cleanir	ngTransfer to a chemic	al waste container for disposal	in accordance with local reg	gulations.
	Up:					
			Section 7.	Handling and Stor	age	
7.1	Precaut	ions To Be Taken	Avoid breathing dust/	fume/gas/mist/vapours/spray.		
	in Hand	ling:	Avoid prolonged or re	peated exposure.		
7.2	Precaut	ions To Be Taken	Keep container tightly	v closed.		
	in Storii	ng:	Store in accordance v	with information listed on the p	roduct insert.	
		Sec	tion 8. Exposu	re Controls/Persona	al Protection	
8.1	Exposur	e Parameters:	•			
CAS	#	Partial Chemical	l Name	Britain EH40	France VL	Europe
	NA	SIRT3 Direct Dev	veloper	No data.	No data.	No data.
CAS	#	Partial Chemical	Name	OSHA TWA	ACGIH TWA	Other Limits
	NA	SIRT3 Direct Dev	veloper	No data.	No data.	No data.
8.2	Exposur	e Controls:			ł	ł
8.2.1	Enginee	ering Controls	Use process enclosu	res, local exhaust ventilation, c	or other engineering controls	to control airborne
	(Ventila	tion etc.):	levels below recomme	ended exposure limits.		
8.2.2	Persona	al protection equi	pment:			
	Eye Pro	tection:	Safety glasses			
	Protecti	ve Gloves:	Compatible chemical-	resistant gloves		
	Other P	rotective Clothing	g:Lab coat			
	-	tory Equipment	NIOSH approved resp	pirator, as conditions warrant.		
	(Specify					
	-	-	n Do not take internally			
	ce Pract	tices:	Facilities storing or ut shower.	ilizing this material should be e	equipped with an eyewash ta	acility and a safety
			Wash thoroughly afte	r handling		
			No data available.	r Harlaning.		

Multi-region format



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		Se	ectior	n 9. Physical and	d Cherr	nical Pi	roperties		
<del>)</del> .1	Informat			d Chemical Properties					
	Physical States: [] Gas [] Liquid [X] Solid								
	Appeara	ince and Odor:		A powder					
	Melting	Point:		No data.					
	Boiling	Point:		No data.					
	Flash Pt	:		No data.					
	Evapora	tion Rate:		No data.					
	Explosiv	xplosive Limits: apor Pressure (vs. Air or mm		LEL: No data. UEL: No data.					
	Vapor P			<b>n</b> No data.					
	Hg):								
	Vapor D	ensity (vs. Air = 1	):	No data.					
	Specific	Gravity (Water =	1):	No data.					
	Solubilit	y in Water:		No data.					
	Autoign	ition Pt:		No data.					
).2	Other Inf	ormation							
	Percent	Volatile:		No data.					
			<u> </u>	action 10 Stabili	the oracle	Deesti			
				ection 10. Stabili	ity and	Reacti	vity		
0.1	Reactivi	-		a available.					
0.2	Stability		Unstab						
0.3				Stable if stored in accordance with information listed on the product insert.					
Polymerization: Will occur [ ] Will not occur [ X ]									
0.4	Conditions To Avoid: protect from light and moisture								
0.5	-	atibility - Materials	strong	oxidizing agents					
	To Avoi								
0.6	Hazardo		No dat	a available.					
	Decomposition Or								
	Byprodu	icts:							
			Se	ction 11. Toxicol	logical l	nforma	ation		
1.1	Information on The toxicological effects of this product have not been thoroughly studied.								
	Toxicological Effects:								
CAS	#	Hazardous Com	ponent	s (Chemical Name)		NTP	IARC	ACGIH	OSHA
	NA	SIRT3 Direct Dev	eloper			n.a.	n.a.	n.a.	n.a.
			S	Section 12. Ecolo	dical In	format	ion	<b> </b>	
2.1	Toxicity				•	lonnat			
2.1	· · · <b>,</b>			Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.					
2.2	Persiste	nco and		a available.		y cauco p			
£.£			NU Udl	ע עימוומאול.					
Degradability:		No dot	a available.						
2.3				a avaliavie.					
<b>.</b> .	Potentia		NI 1.						
2.4	Mobility			a available.					
2.5		of PBT and vPvB	No dat	a available.					
	assessn	nent:							
12.6	Other ac	verse effects:	No dat	a available.					
								N	Iulti-region for



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CHEMICAL				•	ersedes Revision: 03/15/2010		
		Section 13. Dispos	al Considerat	tions			
<b>13.1 Waste Disposal Method:</b> Dispose in accordance with local, state, and federal regulations.							
		Section 14. Tran	sport Informa	tion			
14.1 LAND 1	TRANSPORT (US	DOT):					
DOT Prope	er Shipping Name	Not dangerous goods.					
DOT Hazaı							
UN/NA Nu							
	TRANSPORT (Eur Shipping Name:	opean ADR/RID): Not dangerous goods.					
UN Numbe		Not dangerous goods.					
Hazard Cla							
14.3 AIR TR	ANSPORT (ICAO/	/IATA):					
ICAO/IATA	A Shipping Name:	Not dangerous goods.					
Additional Tra	insport	Transport in accordance with lo	cal, state, and federa	al regulations.			
Information:							
		Section 15. Regu	atory Informa	tion			
EPA SARA (Si	uperfund Amendn	nents and Reauthorization Act	of 1986) Lists				
CAS #	Hazardous Com	nponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)		
NA	SIRT3 Direct Dev	veloper	No	No	No		
CAS #	Hazardous Com	ponents (Chemical Name)	Other US EPA or State Lists				
NA	SIRT3 Direct Dev	veloper	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No				
Regulatory Info	ormation	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)					
Statement:		No.1272/2008.					
		Section 16. Oth	ner Informatio	n			
Revision Date:		04/01/2015					
Additional Info	ormation About	No data available.					
This Product: Company Polic	cy or Disclaimer:	DISCLAIMER: This information currently available to us. Howev express or implied, with respect use. Users should make their of their particular purposes.	rer, we make no warr to such information,	anty of merchanta and we assume r	ability or any other warrant no liability resulting from its		
					Multi-region for		