

### SAFETY DATA SHEET 20-hydroxy Prostaglandin E2 Lipid Maps MS Standard

	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	Product Code:	10007218					
	Product Name:	20-hydroxy Prostaglandin E2 Lipid Maps MS \$	Standard				
	Synonyms:	9-oxo-11.alpha.,15S,20-trihydroxy-prosta-5Z,1	13E-dien-1-oic acid; 20-hydroxy PGE2;				
.2	Relevant identified uses o	f the substance or mixture and uses advised ag	gainst:				
	<b>Relevant identified uses:</b> For research use only, not for human or veterinary 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				
.4	Emergency telephone nur	nber:					
	Emergency Contact:	CHEMTREC Within USA and Canada:	+1 (800)424-9300				
		CHEMTREC Outside USA and Canada:	+1 (703)527-3887				
		Section 2. Hazards Identific	ation				
2.1	Classification of the Subs	tance or Mixture:					
2.1.1	Classification according	to Regulation (EC) No 1272/2008 [CLP]:					
	Flammable Liquids, Cat						
	Flammable Liquids, Cat Serious Eve Damage/Ey	egory 2					
	Serious Eye Damage/Ey	egory 2 e Irritation, Category 2					
2.2	Serious Eye Damage/Ey	egory 2					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements:	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements:	egory 2 e Irritation, Category 2					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements:	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements:	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re	egory 2 re Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]:					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Office Target Organ T Labeling according to Re GHS Signal Word:	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Office According to Re GHS Signal Word: GHS Hazard Phrases:	egory 2 re Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Office Target Organ T GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking.					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expos H225: Highly flammable li	egory 2 re Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor.					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation.					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expos H225: Highly flammable li	egory 2 re Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation.					
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrase	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation. hess or dizziness. s:	<b>q</b> .				
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrases P210: Keep away from {h	egory 2 re Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation.	g.				
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrases P210: Keep away from {h P261: Avoid breathing {du	egory 2 re Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger Sure may cause skin dryness or cracking. quid and vapor. e irritation. esss or dizziness. s: eat/sparks/open flames/hot surfaces} No smoking ust/fume/gas/mist/vapors/spray}.	g.				
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrases P210: Keep away from {h P261: Avoid breathing {du P264: Wash {hands} thore	egory 2 re Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger Sure may cause skin dryness or cracking. quid and vapor. e irritation. esss or dizziness. s: eat/sparks/open flames/hot surfaces} No smoking ust/fume/gas/mist/vapors/spray}.					
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	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrases P210: Keep away from {h P261: Avoid breathing {du P264: Wash {hands} thoro P280: Wear {protective gl GHS Response Phrases	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation. esss or dizziness. s: eat/sparks/open flames/hot surfaces} No smoking ust/fume/gas/mist/vapors/spray}. oughly after handling. oves/protective clothing/eye protection/face protect	tion}.				
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrases P210: Keep away from {h P261: Avoid breathing {du P264: Wash {hands} thoro P280: Wear {protective gl GHS Response Phrases	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation. hess or dizziness. s: eat/sparks/open flames/hot surfaces} No smoking ust/fume/gas/mist/vapors/spray}. bughly after handling. oves/protective clothing/eye protection/face protect	tion}.				
2.2	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrase P210: Keep away from {h P261: Avoid breathing {du P264: Wash {hands} thoro P280: Wear {protective gl GHS Response Phrases P303+361+353: IF ON Se water/shower.	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation. hess or dizziness. s: eat/sparks/open flames/hot surfaces} No smoking ust/fume/gas/mist/vapors/spray}. bughly after handling. oves/protective clothing/eye protection/face protect	tion}. aminated clothing. Rinse skin with				
	Serious Eye Damage/Ey Specific Target Organ T Label Elements: Labeling according to Re Construction GHS Signal Word: GHS Hazard Phrases: EUH066: Repeated expose H225: Highly flammable li H319: Causes serious eye H336: May cause drowsin GHS Precaution Phrases P210: Keep away from {h P261: Avoid breathing {du P264: Wash {hands} thoro P280: Wear {protective gl GHS Response Phrases P303+361+353: IF ON Se water/shower. P304+340: IF INHALED:	egory 2 e Irritation, Category 2 oxicity (single exposure), Category 3 gulation (EC) No 1272/2008 [CLP]: Danger sure may cause skin dryness or cracking. quid and vapor. e irritation. eess or dizziness. s: eat/sparks/open flames/hot surfaces} No smoking ust/fume/gas/mist/vapors/spray}. bughly after handling. oves/protective clothing/eye protection/face protect : KIN (or hair): Remove/take off immediately all conta	ion}. aminated clothing. Rinse skin with sition comfortable for breathing.				



2.3

#### SAFETY DATA SHEET 20-hydroxy Prostaglandin E2 Lipid Maps MS Standard

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P337+313: If eye irritation persists, get medical advice/attention.

#### GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.

- Adverse Human Health Causes serious eye irritation.
  - Effects and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.
    - May be harmful by inhalation, ingestion, or skin absorption.
      - May cause drowsiness or dizziness.
      - May cause skin or respiratory system irritation.
      - Repeated exposure may cause skin dryness or cracking.
      - To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

#### Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
57930-95-7 NA	20-hydroxy Prostaglandin E2	0.05 %	NA NA	Acute Tox.(O) 4: H302 Toxic Repro. 1B: H360
79-20-9 Al9100000	Methyl acetate	99.95 %	201-185-2 607-021-00-X	Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H335 H336

#### Section 4. First Aid Measures

#### 4.1 Description of First Aid No data available.

- 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.
- 4.2 Important Symptoms and Exposure may cause: coughing, drowsiness, narcosis, optic nerve atrophy, chest tightness. Effects, Both Acute and
  - Delayed:

Measures:

#### 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 andCan release vapors that form explosive mixtures at temperatures at or above the flash point. Hazards: Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge. Vapors can travel to a source of ignition and flash back. Flash Pt: -10.00 C Method Used: Closed Cup

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Cay	man			St	andar	ď		20131011. 04/12/2013	
	Explosi	ive Limits:	LEL: 3.1% at	25.0 C	UEL:	16.0%	at 25.0 C		
	Autoigr	nition Pt:	455.00 C						
5.3	Fire Fig	hting Instructions	s: As in any fire, wear	self-containe	ed breath	ning appara	atus pressure-demand (NIOS	SH approved or	
		equivalent), and full protective gear to prevent contact with skin and eyes.							
			Note: Flammable as	diluted in m	nethyl ace	etate.			
			Section 6. Ac	ccidenta	l Rele	ease M	easures		
6.1	Protect	ive Precautions,	Avoid breathing vap	ors and pro	vide ade	quate vent	ilation.		
	Protect	ive Equipment and	d As conditions warra	nt, wear a N	NOSH ap	proved se	If-contained breathing appar	atus, or respirator,	
	Emerge	ency Procedures:	and appropriate per	sonal protect	ction (rub	ber boots,	safety goggles, and heavy r	rubber gloves).	
6.2	Enviror	nmental	Take steps to avoid	release into	the env	ironment, i	if safe to do so.		
	Precaut	tions:							
6.3	Method	s and Material Fo	r Contain spill and co	llect, as app	oropriate.				
	Contair	ment and Cleanir	<b>1g</b> Transfer to a chemi	cal waste co	ontainer f	or disposa	I in accordance with local re	gulations.	
	Up:								
			Section 7	. Hand	ling a	nd Stor	age		
7.1	Precau	tions To Be Taken	Avoid breathing dus		<u> </u>				
	in Handling:		Avoid exposure.	5	•	. ,			
		0	Keep away from sou	irces of ignit	tion.				
			Take precautionary	measures a	gainst sta	atic discha	rge.		
7.2	Precau	tions To Be Taken	Keep away from hea	at, sparks, a	nd flame				
	in Stori	ng:	Keep container tight	ly closed.					
			Store in accordance	tore in accordance with information listed on the product insert.					
	Other F	Precautions:	Protect from moistur	e.					
		Sec	tion 8. Exposi	ure Con	trols/F	Person	al Protection		
8.1	Exposu	re Parameters:							
CAS	#	Partial Chemical	Name	Britain E	EH40		France VL	Europe	
5793	30-95-7	20-hydroxy Prosta	aglandin E2	No data.			No data.	No data.	
79	-20-9	Methyl acetate		TWA: 616 STEL: 770			TWA: 610 mg/m3 (200 ppm) STEL: 760 mg/m3 (250 ppm)	No data.	
CAS	#	Partial Chemical	Name	OSHA T	WA		ACGIH TWA	Other Limits	
5793	30-95-7	20-hydroxy Prosta	aglandin E2	No data.			No data.	No data.	
	-20-9	Methyl acetate		PEL: 200	ppm		TLV: 200 ppm STEL: 250 ppm	No data.	
8.2	Exposu	re Controls:		-			ļ	+	
8.2.1	Engine	ering Controls	Use process enclos	ures, local e	xhaust v	entilation,	or other engineering controls	s to control airborne	
	-	tion etc.):	levels below recomm	nended exp	osure lim	iits.			
8.2.2	Person	al protection equi	pment:						
	Eye Pro	otection:	Safety glasses						
	Protective Gloves:		Compatible chemical-resistant gloves						
	Other Protective Clothing								
	-		NIOSH approved respirator, as conditions warrant.						
	-	у Туре):							
			n Do not take internall	у.					
					material	should be	equipped with an eyewash a	and a safety shower.	
			Wash thoroughly aft	er handling.					
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SAFETY DATA SHEET

Page: 3 of 6



# SAFETY DATA SHEET 20-hydroxy Prostaglandin E2 Lipid Maps MS

Revision: 04/12/2015

Standard

	HEMICAL	Stallualu
		No data available.
	Se	ection 9. Physical and Chemical Properties
9.1	Information on Basic Phys	ical and Chemical Properties
	Physical States:	[]Gas [X]Liquid []Solid
	Appearance and Odor:	Solution
	Melting Point:	No data.
	Boiling Point:	No data.
	Flash Pt:	-10.00 C Method Used: Closed Cup
	Evaporation Rate:	No data.
	Explosive Limits:	LEL: 3.1% at 25.0 C UEL: 16.0% at 25.0 C
	Vapor Pressure (vs. Air or	mm 173 MM_HG at 20.0 C
	Hg):	
	Vapor Density (vs. Air = 1)	
	Specific Gravity (Water = 7	
	Solubility in Water:	No data.
	Autoignition Pt:	455.00 C
9.2	Other Information	
	Percent Volatile:	No data.
	Molecular Formula & Weig	ght: C20H32O6 368.5
		Section 10. Stability and Reactivity
10.1	Reactivity:	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.
	Polymerization:	Will occur [ ] Will not occur [ X ]
10.4	Conditions To Avoid:	heat, flames and sparks
10.5	Incompatibility - Materials	acids
	To Avoid:	bases
		nitrates
		strong oxidizing agents
10.6	Hazardous	carbon dioxide
	Decomposition Or	carbon monoxide
	Byproducts:	

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### SAFETY DATA SHEET 20-hydroxy Prostaglandin E2 Lipid Maps MS

Standard

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Revision: 04/12/2015

			Section 1	1. Toxicolog	gical Informa	ition		
11.1	Information onThe toxicological effects of this product have not been thoroughly studied.Toxicological Effects:Methyl Acetate - Toxicity Data: Oral LD50 (rat): >5,000 mg/kg; Oral LD50 (rabbit): 3,700Skin LD50 (rabbit): >5,000 mg/kg; Inhalation TCLO (human): 15,000 mg/m3; Methyl Acetate - Irritation Data: Skin (rabbit): 500 mg (24h) mild; Eyes (rabbit): 100 mg moderate;							
Chronic Toxicological       Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presente         Effects:       See actual entry in RTECS for complete information.         Methyl Acetate RTECS Number: Al9100000       20-hydroxy PGE2 RTECS Number: UK8027000						sented here.		
	nogenicity			RC Monographs?		gulated? No		
		nponents (Chemical Name)		NTP	IARC	ACGIH	OSHA	
	30-95-7	20-hydroxy Prost	aglandin E2		n.a.	n.a.	n.a.	n.a.
79	-20-9	Methyl acetate	n.a. n.a. n.a. n.a.					n.a.
			Section	12. Ecologi	cal Informati	on		
2.1	Toxicity:			to the environment control or dilution v	vater may cause po	ollution.		
2.2	Persister Degrada		No data available	е.				
Degradability:       12.3     Bioaccumulative     No data available.       Potential:     Potential:								
2.4	Mobility	in Soil:	No data available	е.				
2.5	Results of assessm		3 No data available.					
2.6	Other ad	verse effects:	No data available	e.				
			Section 2	13. Disposal	Considerati	ons		
3.1	Waste Di	isposal Method:	Dispose in accor	dance with local, s	tate, and federal re	gulations.		
				44 T				
			Section	n 14. Transp	ort Informati	on		
14.1	LAND TI	RANSPORT (US I		n 14. Transp	ort Informati	on		
		RANSPORT (US I Shipping Name:	DOT):		ort Informati	on		
D		Shipping Name:	ООТ):			on		
D	OT Prope	r Shipping Name: d Class:	DOT): Methyl Aceta	ate Solution				
D D	OT Propei OT Hazaro	r Shipping Name: d Class:	DOT): Methyl Aceta 3	ate Solution	LIQUID		II	
D D	OT Proper OT Hazarc N/NA Num	r Shipping Name: d Class:	DOT): Methyl Aceta 3 1231	ate Solution FLAMMABLE	LIQUID		II	
D D U 14.1	OT Proper OT Hazard N/NA Num LAND TI	r Shipping Name: d Class: nber:	DOT): Methyl Aceta 3 1231	ate Solution FLAMMABLE	LIQUID		II	
D U 14.1 A U	OT Proper OT Hazard N/NA Num LAND TI	r Shipping Name: d Class: hber: RANSPORT (Euro hipping Name:	DOT): Methyl Aceta 3 1231 (Constant) (Const	ate Solution FLAMMABLE	LIQUID	p:	11	



#### SAFETY DATA SHEET 20-hydroxy Prostaglandin E2 Lipid Maps MS Standard

Page: 6 of 6

Revision: 04/12/2015

14.3	AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name:	Methyl Acetate Solution		
UN Number:	1231	Packing Group:	II
Hazard Class:	3 - FLAMMABLE LIQUID	IATA Classification:	3
Additional Transport	Transport in accordance with loca	l, state, and federal regulations.	
Information:	When sold in quantities of less that	an or equal to 1 mL, or 1 g, with a	n Excepted Quantity Code of
	E1, E2, E4, or E5, this item meets	the De Minimis Quantities exemp	otion, per IATA 2.6.10.
	Therefore packaging does not have	ve to be labeled as Dangerous Go	oods/Excepted Quantity.

## Section 15. Regulatory Information

CAS #	Hazardous Co	mponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)		
57930-95-7	20-hydroxy Pro	staglandin E2	No	No	No		
79-20-9	Methyl acetate		No	No	No		
CAS #	Hazardous Co	mponents (Chemical Name)	Other US EPA o	Other US EPA or State Lists			
57930-95-7	20-hydroxy Prostaglandin E2		CAA HAP,ODC: PROP.65: No	No; CWA NPDES	: No; TSCA: No; CA		
79-20-9	Methyl acetate			No; CWA NPDES , 8A PAIR; CA PR	:: No; TSCA: Yes - 20P.65: No		
Regulatory Inf Statement:	formation	This SDS was prepared in acc No.1272/2008.	cordance with 29 CFF	R 1910.1200 and R	Regulation (EC)		
		Section 16. Ot	her Informatio	on			
Revision Date	:	04/12/2015					
Additional Info This Product:	ormation About	No data available.					
Company Poli	cy or Disclaimer	<ul> <li>DISCLAIMER: This information currently available to us. Howe express or implied, with respect use. Users should make their their particular purposes.</li> </ul>	ever, we make no wa ct to such informatior	rranty of merchant	ability or any other warrant no liability resulting from its		