

			cording to Regulation (EC) No. 190	17/2006 as amended by		Supersedes Revision: 03/28/2011
			Identification of the Substar			
	D				ine company/or	IUCITAKINY
.1	Product Product		10006870 Renin Assay Buffer (10X)		
•					•	
.2			of the substance or mixture a	ind uses advised ag	gainst:	
.3	Details o	of the Supplier of	the Safety Data Sheet:			
	Compa	any Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	pany		
	Web si	ite address:	www.caymanchem.com			
	Inform		Cayman Chemical Comp	panv	+1 (734	4)971-3335
.4	Emerge	ncy telephone nu	, , ,		Υ -	,
	-	ency Contact:	CHEMTREC Within USA	and Canada:	+1 (80	0)424-9300
	-	-	CHEMTREC Outside US	A and Canada:		3)527-3887
			Section 2. Haz	zards Identific	ation	
2.1	Classific	cation of the Subs	tance or Mixture:			
2.1.1	Classifi	cation according	to Regulation (EC) No 1272/2	2008 [CLP]:		
	Skin C	orrosion/Irritation	n, Category 3			
2.2	Label El	ements:				
2.2.1	Labelin	g according to Re	gulation (EC) No 1272/2008	[CLP]:		
	GHS S	ignal Word:	Warning			
	GHS H	lazard Phrases:	C C			
	H316:	Causes mild skin i	rritation.			
	GHS P	Precaution Phrase	s:			
	No phr	ases apply.				
		Response Phrases	8:			
	P332+	313: If skin irritation	n occurs, get medical advice/a	ttention.		
	GHS S	Storage and Dispo	sal Phrases:			
	Please	e refer to Section 7	for Storage and Section 13 for	Disposal information	ז.	
2.3		e Human Health	Causes mild skin irritation.			
	Effects	and Symptoms:	Material may be irritating to the			piratory tract.
			May be harmful by inhalation	•	bsorption.	
			May cause eye or respiratory	•	operties have not	been thoroughly investigated.
		Sect	tion 3. Composition		-	
CAS	#/		ponents (Chemical Name)/	Concentration	EC No./	GHS Classification
RTEC		REACH Registra			EC Index No.	
77-	·86-1	Trizma base		6.06 %	201-064-4	Skin Corr. 2: H315
TY290	00000				NA	Eye Damage 2: H319
				ļ		STOT (SE) 3: H335
7647 VZ472	7-14-5 25000	Sodium chloride		5.86 %	231-598-3 NA	No data available.
	2-18-5 10000	Water		88.08 %	231-791-2 NA	No data available.
						· Multi-region forn



		Section 4. First Aid Measures
l.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 contaminate
	in case of Skin Contact.	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.
		A solid water stream may be inefficient.
	Media:	
5.2	Flammable Properties an	dNo data available.
	Hazards:	
	Flash Pt:	No data. LEL: No data. UEL: No data.
	Explosive Limits: Autoignition Pt:	LEL: No data. UEL: No data. No data.
5 2	-	
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 breathing vapors 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:	
6.2	Mothedo and Material Fe	· Contain anill and collect, as appropriate
6.3		r Contain spill and collect, as appropriate.
6.3	Containment and Cleanir	r Contain spill and collect, as appropriate. ng Transfer to a chemical waste container for disposal in accordance with local regulations.
6.3		ngTransfer to a chemical waste container for disposal in accordance with local regulations.
	Containment and Cleanir Up:	ngTransfer to a chemical waste container for disposal in accordance with local regulations. Section 7. Handling and Storage
	Containment and Cleanir Up: Precautions To Be Taken	ngTransfer to a chemical waste container for disposal in accordance with local regulations. Section 7. Handling and Storage Avoid breathing dust/fume/gas/mist/vapours/spray.
7.1	Containment and Cleanin Up: Precautions To Be Taken in Handling:	 Transfer to a chemical waste container for disposal in accordance with local regulations. Section 7. Handling and Storage Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
	Containment and Cleanin Up: Precautions To Be Taken in Handling:	ngTransfer to a chemical waste container for disposal in accordance with local regulations. Section 7. Handling and Storage Avoid breathing dust/fume/gas/mist/vapours/spray.



.1	Exposure	Parameters:					
CAS		Partial Chemical Name		Britain EH40		France VL	Europe
		Trizma base		No data.		No data.	No data.
-	-	Sodium chloride		No data.		No data.	No data.
		Water		No data.		No data.	No data.
CAS	#	Partial Chemical Name		OSHA TWA		ACGIH TWA	Other Limits
77	-86-1	Trizma base		No data.		No data.	No data.
764	7-14-5	Sodium chloride		No data.		No data.	No data.
773	2-18-5	Water		No data.		No data.	No data.
8.2	Exposure	e Controls:					
3.2.1	Engineer	ring Controls Use p	rocess enclos	ures, local exhaust	ventilation, o	or other engineering c	ontrols to control airb
	(Ventilati	ion etc.): levels	below recomm	mended exposure I	imits.		
3.2.2	Persona	I protection equipment:					
	Eye Prot	ection: Safety	/ glasses				
	Protectiv	ve Gloves: Comp	atible chemica	al-resistant gloves			
	Other Pro	otective Clothing:Lab co	oat				
	Respirate	ory Equipment NIOS	H approved re	spirator, as conditi	ons warrant.		
	(Specify	Туре):					
	Work/Hy	gienic/Maintenan Do no	t take internall	ly.			
	Work/Hy ce Practi	-		-	al should be e	equipped with an eye	wash facility and a sat
	-	-	ies storing or u	-	al should be e	equipped with an eye	wash facility and a sa
	-	ices: Facilit showe	ies storing or u	utilizing this materia	al should be e	equipped with an eye	wash facility and a sa
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9.1	ce Practi	ces: Facilit showe Wash No da	ies storing or u er. thoroughly aft ta available. n 9. Phy	utilizing this materia ter handling. Sical and Ch			wash facility and a sa
9.1	ce Practi	ices: Facilit showe Wash No da Sectio on on Basic Physical ar	ies storing or u er. thoroughly aft ta available. <u>N 9. Phy</u> nd Chemical I	utilizing this materia ter handling. Sical and Ch Properties	nemical F		wash facility and a sa
9.1	ce Practi Information Physical	ices: Facilit showe Wash No da Sectio on on Basic Physical ar States:	ies storing or u er. thoroughly aft ta available. <u>N 9. Phy</u> nd Chemical I	utilizing this materia ter handling. Sical and Ch Properties			wash facility and a sa
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9.1	ce Practi Informatio Physical Appearat pH:	ices: Facilit showe Wash No da Sectio on on Basic Physical ar States: nce and Odor:	ies storing or u er. thoroughly aft ta available. n 9. Phy d Chemical I [] Gas Solution	utilizing this materia ter handling. Sical and Ch Properties	nemical F		wash facility and a sa
9.1	ce Practi Informatio Physical Appeara pH: Melting F	ices: Facilit showe Wash No da Sectio on on Basic Physical ar States: nce and Odor: Point:	ies storing or u er. thoroughly aft ta available. n 9. Phy nd Chemical I [] Gas Solution 8.0	utilizing this materia ter handling. Sical and Ch Properties	nemical F		wash facility and a sa
9.1	ce Practi Informatio Physical Appeara pH: Melting F Boiling F	ices: Facilit showe Wash No da Sectio on on Basic Physical ar States: nce and Odor: Point: Point:	ies storing or u er. thoroughly aft ta available. n 9. Phy nd Chemical I [] Gas Solution 8.0 No data.	utilizing this materia ter handling. Sical and Ch Properties	nemical F		wash facility and a sa
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9.1	ce Practi Informatic Physical Appearan pH: Melting F Boiling F Flash Pt: Evaporat Flammat	ices: Facilit showe Wash No da Sectio on on Basic Physical ar States: nce and Odor: Point: Point: point: tion Rate: pility (solid, gas):	ies storing or u er. thoroughly aft ta available. n 9. Phy nd Chemical I [] Gas Solution 8.0 No data. No data. No data. No data.	utilizing this materia ter handling. Sical and Ch Properties [X] Liquid []	nemical F		wash facility and a sa
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9.2	Other Infe	ormation							
	Percent	Volatile:	No da	ata.					
			Section	on 10. Stability and	d Reacti	vity			
10.1	Reactivit	t y:	No data avai	lable.					
10.2	Stability	:	Unstable [] Stable [X]					
10.3	Stability	Note(s):	Stable if stor	ed in accordance with inforn	nation listed of	on the product	insert.		
	Polymer	ization:	Will occur [] Will not occur [X]						
10.4	Conditio	ns To Avoid:	No data avai	lable.					
10.5	Incompa	tibility - Materials	No data avai	lable.					
	To Avoid	1:							
10.6	Hazardo	us	No data avai	lable.					
	Decomp	osition or							
	Byprodu	icts:							
			Section	n 11. Toxicologica	l Informa	ation			
11.1	Informat	ion on	The toxicolo	gical effects of this product h	ave not beer	n thoroughly st	tudied.		
	Toxicolo	gical Effects:							
Carcir	nogenicity	/:	NTP? No	IARC Monographs? No	OSHA Re	egulated? No			
CAS #	#	Hazardous Com	ponents (Che	emical Name)	NTP	IARC	ACGIH	OSHA	
77.	-86-1	Trizma base			n.a.	n.a.	n.a.	n.a.	
764	7-14-5	Sodium chloride			n.a.	n.a.	n.a.	n.a.	
773	2-18-5	Water			n.a.	n.a.	n.a.	n.a.	
		·	Secti	on 12. Ecological	Informat	ion			
12.1	Toxicity:		Avoid releas	e into the environment.					
			Runoff from f	fire control or dilution water i	may cause p	ollution.			
12.2	Persiste	nce and	No data avai	lable.					
	Degrada	bility:							
12.3	Bioaccu	mulative	No data available.						
	Potentia	l:							
12.4	Mobility	in Soil:	No data avai	lable.					
12.5	Results	of PBT and vPvB	No data available.						
	assessm	nent:							
12.6	Other ad	verse effects:	No data avai	ilable.					
			Sectio	n 13. Disposal Co	nsiderat	ions			
13.1	Waste D	isposal Method:	Dispose in a	ccordance with local, state, a	and federal re	egulations.			



Supersedes Revision: 03/28/2011 Section 14. Transport Information LAND TRANSPORT (US DOT): 14.1 DOT Proper Shipping Name: Not dangerous goods. DOT Hazard Class: UN/NA Number: LAND TRANSPORT (European ADR/RID): 14.1 ADR/RID Shipping Name: Not dangerous goods. **UN Number:** Hazard Class: 14.3 AIR TRANSPORT (ICAO/IATA): ICAO/IATA Shipping Name: Not dangerous goods. Additional Transport Transport in accordance with local, state, and federal regulations. Information: Section 15. Regulatory Information EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists CAS # Hazardous Components (Chemical Name) S. 302 (EHS) S. 304 RQ S. 313 (TRI) 77-86-1 Trizma base No No Yes-Cat. N106 7647-14-5 Sodium chloride No No No 7732-18-5 Water No No No CAS # Hazardous Components (Chemical Name) Other US EPA or State Lists CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes -77-86-1 Trizma base Inventory; CA PROP.65: No 7647-14-5 CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -Sodium chloride Inventory; CA PROP.65: No 7732-18-5 Water CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes -Inventory; CA PROP.65: No This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) **Regulatory Information** No.1272/2008. Statement: Section 16. Other Information **Revision Date:** 05/03/2015 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.



Renin (human recombinant) Assay Reagent

Product Name: Renin (human recombinant) Assay Reagent 1.2 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. 1.3 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 1.4 Emergency telephone number: Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300 CHEMTREC Outside USA and Canada: 2.1 Classification of the Substance or Mixture: 2.1 2.1 Classification according to Regulation (EC) No 1272/2008 [CLP]: Skin Corrosion/Irritation, Category 3 Serious Eye Damage/Eye Irritation, Category 2A 2.2 Label Elements:	Identification of the Substance/Mixture and of the Company/Undertaking 10006871 Renin (human recombinant) Assay Reagent of the substance or mixture and uses advised against: : For research use only, not for human or veterinary use. the Safety Data Sheet: Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 www.caymanchem.com Cayman Chemical Company +1 (734)971-3335 mber: CHEMTREC Within USA and Canada: +1 (800)424-9300 CHEMTREC Outside USA and Canada: +1 (703)527-3887 Section 2. Hazards Identification tance or Mixture: to Regulation (EC) No 1272/2008 [CLP]: h, Category 3 re Irritation, Category 2A	Section 1. Identification of the Sub 1.1 Product Code: 10006871 Product Name: Renin (human recom 1.2 Relevant identified uses of the substance or mixture Relevant identified uses: For research use onl 1.3 Details of the Supplier of the Safety Data Sheet: Company Name: Cayman Chemical C 1180 E. Ellsworth Row Ann Arbor, MI 48103 Web site address: www.caymanchem.com Information: Cayman Chemical C 1.4 Emergency telephone number: Emergency Contact: CHEMTREC Within I CHEMTREC Outside Section 2. 2.1 Classification of the Substance or Mixture: 2.1.1 Classification according to Regulation (EC) No 12 Skin Corrosion/Irritation, Category 3 Serious Eye Damage/Eye Irritation, Category 2A 2.2 Label Elements:	Ibstance/Mixture and of the Company/Undertaking ombinant) Assay Reagent ature and uses advised against: inly, not for human or veterinary use. Company Rd. 08 i.com Company +1 (734)971-3335 in USA and Canada: +1 (800)424-9300 de USA and Canada: +1 (703)527-3887
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Product Name: Renin (human recombinant) Assay Reagent 1.2 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. 1.3 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 1.4 Emergency telephone number: Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300 CHEMTREC Outside USA and Canada: 2.1 Classification of the Substance or Mixture: 2.1 2.1 Classification according to Regulation (EC) No 1272/2008 [CLP]: Skin Corrosion/Irritation, Category 3 Serious Eye Damage/Eye Irritation, Category 2A 2.2 Label Elements:	Renin (human recombinant) Assay Reagent of the substance or mixture and uses advised against: :: For research use only, not for human or veterinary use. the Safety Data Sheet: Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 www.caymanchem.com Cayman Chemical Company +1 (734)971-3335 mber: CHEMTREC Within USA and Canada: +1 (800)424-9300 CHEMTREC Outside USA and Canada: +1 (703)527-3887 Section 2. Hazards Identification tance or Mixture: to Regulation (EC) No 1272/2008 [CLP]: h, Category 3 re Irritation, Category 2A	Product Name: Renin (human recommendation of the substance or mixture Relevant identified uses of the substance or mixture Relevant identified uses: For research use on the safety Data Sheet: 1.3 Details of the Supplier of the Safety Data Sheet: Company Name: Cayman Chemical Company Name: 1.3 Company Name: Cayman Chemical Company Name: Cayman Chemical Company Name: 1.4 Company telephone number: Emergency telephone number: Emergency Contact: CHEMTREC Within the CHEMTREC Outside 2.1 Classification of the Substance or Mixture: 2.1 Classification according to Regulation (EC) No 12 Skin Corrosion/Irritation, Category 3 Serious Eye Damage/Eye Irritation, Category 2A 2.2 Label Elements:	Atture and uses advised against: Innly, not for human or veterinary use. Company Rd. 08 Incom Company +1 (734)971-3335 In USA and Canada: +1 (800)424-9300 de USA and Canada: +1 (703)527-3887
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			2008 [CLP]:
GHS Signal Word: Warning	Warning	GHS Signal Word: Warning	
GHS Hazard Phrases:			
H316: Causes mild skin irritation. H319: Causes serious eye irritation.			
	e irritation.		
P264: Wash {hands} thoroughly after handling.	e irritation. s:	GHS Precaution Phrases:	
	e irritation. s: oughly after handling.	GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling.	'eye protection/tace protection}.
P264: Wash {hands} thoroughly after handling.	e irritation. s: oughly after handling. loves/protective clothing/eye protection/face protection}.	GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eg	reve protection/face protection}.
P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eye protection/face protection}.	e irritation. s: oughly after handling. loves/protective clothing/eye protection/face protection}. s:	GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eg GHS Response Phrases:	
P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eye protection/face protection}. GHS Response Phrases:	e irritation. s: oughly after handling. loves/protective clothing/eye protection/face protection}. s:	GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eg GHS Response Phrases: P305+351+338: IF IN EYES: Rinse cautiously with	
P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eye protection/face protection}. GHS Response Phrases: P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present a	e irritation. s: oughly after handling. loves/protective clothing/eye protection/face protection}. s: ES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy	GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/ey GHS Response Phrases: P305+351+338: IF IN EYES: Rinse cautiously with to do. Continue rinsing.	h water for several minutes. Remove contact lenses, if present and easy
P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eye protection/face protection}. GHS Response Phrases: P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present a to do. Continue rinsing.	e irritation. s: oughly after handling. loves/protective clothing/eye protection/face protection}. s: ES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy n occurs, get medical advice/attention.	GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/ey GHS Response Phrases: P305+351+338: IF IN EYES: Rinse cautiously with to do. Continue rinsing. P332+313: If skin irritation occurs, get medical advis	h water for several minutes. Remove contact lenses, if present and easy vice/attention.
P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eye protection/face protection}. GHS Response Phrases: P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present a to do. Continue rinsing. P332+313: If skin irritation occurs, get medical advice/attention.	e irritation. s: oughly after handling. loves/protective clothing/eye protection/face protection}. s: ES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy n occurs, get medical advice/attention. n persists, get medical advice/attention.	GHS Precaution Phrases: P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/ey GHS Response Phrases: P305+351+338: IF IN EYES: Rinse cautiously with to do. Continue rinsing. P332+313: If skin irritation occurs, get medical advi P337+313: If eye irritation persists, get medical advi	h water for several minutes. Remove contact lenses, if present and easy vice/attention.



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Renin (human recombinant) Assay Reagent

Revision: 05/03/2015 Supersedes Revision: 03/28/2011

2.3 Adverse Human Health Causes mild skin and serious eye irritation.
 Effects and Symptoms: Material may be irritating to the mucous me May be harmful by inhalation, ingestion, or

Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. 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 # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	Renin (human recombinant)	0.0 -1.0 %	NA NA	No data available.
10049-21-5 WA1900000	Sodium phosphate monobasic, monohydrate	0.0 -1.0 %	NA NA	Skin Corr. 2: H315 Eye Damage 2A: H319 STOT (SE) 3: H335 H336
7732-18-5 ZC0110000	Water	98.0 -100.0 %	231-791-2 NA	No data available.

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 Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Suitable Extinguishing 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.



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Renin (human recombinant) Assay Reagent

				cidental Releas		
6.1		ive Precautions,	÷ .	ors and provide adequa		
					ved self-contained breathing	
	Emerge	ncy Procedures:	and appropriate pers	sonal protection (rubber	boots, safety goggles, and I	neavy rubber gloves).
6.2	Environ	mental	Take steps to avoid	release into the environ	ment, if safe to do so.	
	Precaut	ions:				
5.3			r Contain spill and col			
	Contain	ment and Cleanir	ngTransfer to a chemic	al waste container for d	lisposal in accordance with le	ocal regulations.
	Up:					
			Section 7.	Handling and	Storage	
7.1	Precaut	ions To Be Taker	Avoid breathing dust	/fume/gas/mist/vapours/	/spray.	
	in Hand		Avoid prolonged or re			
7.2		-	Keep container tightly			
	in Stori			with information listed o	n the product insert.	
		-			-	
		Sec	tion 8. Exposu	ire Controls/Pe	rsonal Protection	
3.1	Exposur	e Parameters:				
CAS	#	Partial Chemical	Name	Britain EH40	France VL	Europe
	NA	Renin (human red	combinant)	No data.	No data.	No data.
1004	19-21-5	Sodium phosphat	e monobasic,	No data.	No data.	No data.
		monohydrate				
773	2-18-5	monohydrate Water		No data.	No data.	No data.
			Name	No data. OSHA TWA	No data.	No data. Other Limits
CAS		Water				
CAS	#	Water Partial Chemical	combinant)	OSHA TWA	ACGIH TWA	Other Limits
CAS	# NA	Water Partial Chemical Renin (human red	combinant)	OSHA TWA No data.	ACGIH TWA No data.	Other Limits No data.
CAS ; 1004	# NA	Water Partial Chemical Renin (human red Sodium phosphat	combinant)	OSHA TWA No data.	ACGIH TWA No data.	Other Limits No data.
CAS 1 1004 773	# NA 49-21-5 2-18-5	Water Partial Chemical Renin (human red Sodium phosphat monohydrate	combinant)	OSHA TWA No data. No data.	ACGIH TWA No data. No data.	Other Limits No data. No data.
CAS ; 1004 773 3.2	# NA 19-21-5 2-18-5 Exposur	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water	combinant) e monobasic,	OSHA TWA No data. No data. No data.	ACGIH TWA No data. No data.	Other Limits No data. No data. No data. No data.
CAS = 1004 773 3.2	# NA 49-21-5 2-18-5 Exposur Enginee	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls:	combinant) re monobasic, Use process enclosu	OSHA TWA No data. No data. No data.	ACGIH TWA No data. No data. No data. No data.	Other Limits No data. No data. No data. No data.
1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls	combinant) e monobasic, Use process enclosu levels below recomm	OSHA TWA No data. No data. No data. res, local exhaust venti	ACGIH TWA No data. No data. No data. No data.	Other Limits No data. No data. No data. No data.
1004 773 3.2 3.2.1	# NA 49-21-5 2-18-5 Exposur Enginee (Ventila Persona	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.):	combinant) e monobasic, Use process enclosu levels below recomm	OSHA TWA No data. No data. No data. res, local exhaust venti	ACGIH TWA No data. No data. No data. No data.	Other Limits No data. No data. No data. No data.
1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi	combinant) re monobasic, Use process enclosu levels below recomm pment:	OSHA TWA No data. No data. No data. res, local exhaust ventil rended exposure limits.	ACGIH TWA No data. No data. No data. No data.	Other Limits No data. No data. No data. No data.
CAS = 1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro Protecti	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi otection:	combinant) re monobasic, Use process enclosu levels below recomm pment: Safety glasses Compatible chemical	OSHA TWA No data. No data. No data. res, local exhaust ventil rended exposure limits.	ACGIH TWA No data. No data. No data. No data.	Other Limits No data. No data. No data. No data.
CAS = 1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro Protecti Other P	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi otection: ive Gloves: rotective Clothing	combinant) re monobasic, Use process enclosu levels below recomm pment: Safety glasses Compatible chemical g:Lab coat	OSHA TWA No data. No data. No data. res, local exhaust ventil rended exposure limits.	ACGIH TWA No data. No data. No data. No data. Interference of the second	Other Limits No data. No data. No data. No data.
1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro Protecti Other P	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi otection: ive Gloves: rotective Clothing tory Equipment	combinant) re monobasic, Use process enclosu levels below recomm pment: Safety glasses Compatible chemical g:Lab coat	OSHA TWA No data. No data. No data. res, local exhaust ventil rended exposure limits.	ACGIH TWA No data. No data. No data. No data. Interference of the second	Other Limits No data. No data. No data. No data.
1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro Protecti Other P Respira (Specify	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi otection: ive Gloves: rotective Clothing tory Equipment / Type):	combinant) re monobasic, Use process enclosu levels below recomm pment: Safety glasses Compatible chemical g:Lab coat NIOSH approved res	OSHA TWA No data. No data. No data. No data. res, local exhaust ventil ended exposure limitsresistant gloves pirator, as conditions w	ACGIH TWA No data. No data. No data. No data. Interference of the second	Other Limits No data. No data. No data. No data.
1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro Protecti Other P Respira (Specify Work/H	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi otection: ive Gloves: rotective Clothing tory Equipment y Type): ygienic/Maintenar	combinant) re monobasic, Use process enclosu levels below recomm pment: Safety glasses Compatible chemical g:Lab coat NIOSH approved res	OSHA TWA No data. No data. No data. res, local exhaust ventile rended exposure limits. -resistant gloves pirator, as conditions w /.	ACGIH TWA No data. No data. No data. No data. Interference of the second	Other Limits No data. No data. No data. No data. controls to control airbor
1004 773 3.2 3.2.1	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro Protecti Other P Respira (Specify	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi otection: ive Gloves: rotective Clothing tory Equipment y Type): ygienic/Maintenar	combinant) re monobasic, Use process enclosu levels below recomm pment: Safety glasses Compatible chemical g:Lab coat NIOSH approved res n Do not take internally	OSHA TWA No data. No data. No data. res, local exhaust ventile rended exposure limits. -resistant gloves pirator, as conditions w /.	ACGIH TWA No data. No data. No data. No data.	Other Limits No data. No data. No data. No data. controls to control airbor
CAS ; 1004	# NA 19-21-5 2-18-5 Exposur Enginee (Ventila Persona Eye Pro Protecti Other P Respira (Specify Work/H	Water Partial Chemical Renin (human red Sodium phosphat monohydrate Water re Controls: ering Controls tion etc.): al protection equi otection: ive Gloves: rotective Clothing tory Equipment y Type): ygienic/Maintenar	combinant) e monobasic, Use process enclosu levels below recomm pment: Safety glasses Compatible chemical g:Lab coat NIOSH approved res n Do not take internally Facilities storing or u	OSHA TWA No data. No data. No data. res, local exhaust ventile rended exposure limits. -resistant gloves pirator, as conditions w /. tilizing this material sho	ACGIH TWA No data. No data. No data. No data.	Other Limits No data. No data. No data. No data. controls to control airbor



Renin (human recombinant) Assay Reagent

		Sectio	on 9. Physical a	nd Chemi	cal Pro	perties		
.1	Informat	ion on Basic Physical a	nd Chemical Properties					
	Physica	I States:	[]Gas [X]Liquid	[] Solid				
	Appeara	ance and Odor:	Solution					
	pH:		6.5					
	Melting	Point:	No data.					
	Boiling	Point:	No data.					
	Flash Pt	::	No data.					
	-	ation Rate:	No data.					
		bility (solid, gas):	No data available.					
	=	ve Limits:	LEL: No data.	ι	JEL: No d	ata.		
		ressure (vs. Air or mm	No data.					
	Hg): Vener D	(1)	No data					
	-	ensity (vs. Air = 1):	No data.					
	-	: Gravity (Water = 1): ty in Water:	No data. No data.					
		-						
	Autoign		No data.					
9.2		formation						
	Percent	Volatile:	No data.					
		5	Section 10. Stab	ility and R	eactivit	ty		
10.1	Reactivi	ty: No da	ata available.					
10.2	Stability	Unsta	ble [] Stable [X]					
10.3			e if stored in accordance	with information	n listed on	the product i	nsert.	
	Polyme	rization: Will o	ccur [] Will not occ	ur [X]				
10.4	Conditio	ons To Avoid: No da	ata available.					
10.5	-	atibility - Materials No da	ata available.					
	To Avoi	d:						
10.6	Hazardo		ata available.					
	-	osition or						
	Byprodu	ucts:						
		Se	ection 11. Toxico	ological In	formati	on		
11.1	Informa	tion on The to	oxicological effects of this	product have	not been th	noroughly stu	died.	
	Toxicolo	ogical Effects:						
Carci	nogenicity	y: NTP?	No IARC Monogra	ohs? No O	SHA Regu	lated? No		
CAS	#	Hazardous Componen	ts (Chemical Name)	N	ITP	IARC	ACGIH	OSHA
	NA	Renin (human recombin	hant)	n	.a.	n.a.	n.a.	n.a.
1004	49-21-5	Sodium phosphate mon	obasic, monohydrate	n	.a.	n.a.	n.a.	n.a.
770	2-18-5	Water		n	.a.	n.a.	n.a.	n.a.



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Renin (human recombinant) Assay Reagent

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			Section 12. Ecol	ogical Inform	ation		
12.1	Toxicity	/:	Avoid release into the environ	ment.			
			Runoff from fire control or dilut	ion water may cause	e pollution.		
12.2	Persiste Degrada	ence and ability:	No data available.				
12.3	Bioaccu Potentia	umulative al:	No data available.				
12.4	Mobility	in Soil:	No data available.				
12.5	Results	of PBT and vPvB	No data available.				
	assessr	nent:					
12.6	Other a	dverse effects:	No data available.				
			Section 13. Dispo				
13.1	Waste D	Disposal Method:	Dispose in accordance with lo	cal, state, and federa	al regulations.		
			Section 14. Trai	nsport Inform	ation		
14.1	LAND 1	RANSPORT (US	DOT):				
D	OT Hazar		Not dangerous goods.				
14.1 Δ		FRANSPORT (Euro Shipping Name:	Not dangerous goods.				
	UN Number:						
H	azard Cla	ass:					
14.3	AIR TR	ANSPORT (ICAO/	IATA):				
IC	AO/IATA	Shipping Name:	Not dangerous goods.				
	ional Tra	nsport	Transport in accordance with	local, state, and fede	eral regulations.		
Inforn	nation:				_		
			Section 15. Regu	ulatory Inform	ation		
	•	· · · · · · · · · · · · · · · · · · ·	nents and Reauthorization Act	,			
CAS			ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
	NA	Renin (human re		No	No	No	
	9-21-5		te monobasic, monohydrate	No	No	No	
//3	2-18-5	Water		No	No	No	
CAS			ponents (Chemical Name)	Other US EPA c			
	NA	Renin (human re		PROP.65: No		: No; TSCA: No; CA	
	9-21-5		te monobasic, monohydrate	PROP.65: No		: No; TSCA: No; CA	
	2-18-5	Water		CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No			



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Renin (human recombinant) Assay Reagent

CHIMICAL	Supersedes Revision. 03/26/2011
Regulatory Information	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)
Statement:	No.1272/2008.
	Section 16. Other Information
Revision Date:	05/03/2015
Additional Information About	No data available.
This Product:	
	No data available. 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.



	INTMICAL		Supersedes Revision: 03/28/2011
	acc	cording to Regulation (EC) No. 1907/2006 as amended by	r (EC) No. 1272/2008
	Section 1.	Identification of the Substance/Mixture and of the	the Company/Undertaking
1.1	Product Code:	10006872	
	Product Name:	Renin Substrate	
1.2	Relevant identified uses o	of the substance or mixture and uses advised ag	gainst:
	Relevant identified uses	For research use only, not for human or veteri	inary use.
1.3	Details of the Supplier of t	he Safety Data Sheet:	
	Company Name:	Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	
	Web site address:	www.caymanchem.com	
1	Information:	Cayman Chemical Company	+1 (734)971-3335
1.4	Emergency telephone nun	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	cation
2.1	Classification of the Subs	tance or Mixture:	
2.1.1	Classification according f	to Regulation (EC) No 1272/2008 [CLP]:	
	Flammable Liquids, Cate	egory 4	
	Skin Corrosion/Irritation	ı, Category 2	
	Serious Eye Damage/Ey	e Irritation, Category 2A	
2.2	Label Elements:		
2.2.1	Labeling according to Re	gulation (EC) No 1272/2008 [CLP]:	
	\wedge		
	GHS Signal Word:	Warning	
	GHS Hazard Phrases:	Warning	
	H227: Combustible liquid.		
	H315: Causes skin irritatio		
	H319: Causes serious eye		
	GHS Precaution Phrases		
1		eat/sparks/open flames/hot surfaces} No smoking	a.
	P264: Wash {hands} thore		5
		loves/protective clothing/eye protection/face protect	tion}.
	GHS Response Phrases	::	
1	P302+352: IF ON SKIN: \	Wash with plenty of soap and water.	
	P305+351+338: IF IN EY	ES: Rinse cautiously with water for several minutes	s. Remove contact lenses, if present and easy
	to do. Continue rinsing.		
	P332+313: If skin irritatior	n occurs, get medical advice/attention.	
1	P337+313: If eye irritation	n persists, get medical advice/attention.	
1	P362+364: Take off conta	aminated clothing and wash it before reuse.	
	GHS Storage and Dispo	sal Phrases:	
	Please refer to Section 7	for Storage and Section 13 for Disposal information	٦.



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2.3	Adverse Human Health	Causes skin and serious eye irritation.
	Effects and Symptoms:	DMSO has the potential to carry toxic materials or materials of unknown toxicity into the body.
		DMSO is readily absorbed through skin.
		Material may be irritating to the mucous membranes and upper respiratory tract.
		May be harmful by inhalation, ingestion, or skin absorption.
		May cause respiratory system irritation.
		To the best of our knowledge, the toxicological properties have not been thoroughly investigated.
		tion 3 Composition/Information on Ingredients

Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	Renin Substrate	0.022 %	NA NA	No data available.
67-68-5 PV6210000	Dimethyl sulfoxide, anhydrous	99.978 %	200-664-3 NA	Flam. Liq. 4: H227 Eye Damage 2A: H319 Skin Corr. 2: H315

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.
4.2		Exposure may cause: hematuria or shortness of breath (dyspnea).
	Effects, Both Acute and	Exposure may cause: gastrointestinal irritation with nausea, vomiting, diarrhea, headache,
	Delayed:	dizziness, and drowsiness.
<u> </u>		Eye contact may cause blurry vision, burning sensation, redness, tearing, and vasodilation.
		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	dCan release vapors that form explosive mixtures at temperatures at or above the flashpoint.
	Hazards:	Container explosion may occur under fire conditions.
		Emits toxic fumes under fire conditions.
		Sensitive to static discharge.
	Flash Pt:	89.00 C Method Used: Closed Cup
	Explosive Limits:	LEL: 3.5% at 25.0 C UEL: 42.0% at 25.0 C
	Autoignition Pt:	215.00 C
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.



Note: Combustible as diluted in dimethyl sulfoxide

1						
			Section 6. Ac	cidental Releas	e Measures	
6.1	Protect	ive Precautions, ive Equipment and ency Procedures:	As conditions warra		te ventilation. ved self-contained breathing boots, safety goggles, and h	
6.2	-	nmental	Take steps to avoid	release into the environ	ment, if safe to do so.	
	Precau	tions:				
6.3			· Contain spill and col			
		nment and Cleanin	gTransfer to a chemic	cal waste container for d	isposal in accordance with lo	ocal regulations.
	Up:					
			Section 7	. Handling and	Storage	
7.1	Precau	tions To Be Taken	Avoid breathing dust	/fume/gas/mist/vapours/	′spray.	
	in Hand	lling:	Avoid prolonged or re			
			Keep away from sou	-	diacheana	
7.2	Procesus	tions To Bo Takon	Keep away from hea	neasures against static t, sparks and flame	discharge.	
1.2	in Stori		Keep container tight	-		
				with information listed o	n the product insert.	
	Other F	Precautions:	Hygroscopic.			
		Sec	tion 8 Exposi	ire Controls/Pei	rsonal Protection	
8.1	Exposu	re Parameters:				
CAS	-	Partial Chemical	Namo	Britain EH40	France VL	Europe
CAS,	MA	Renin Substrate	Name	No data.	No data.	No data.
67	-68-5	Dimethyl sulfoxide	anhydrous	No data.	No data.	No data.
CAS		Partial Chemical	_	OSHA TWA		Other Limits
	 NA	Renin Substrate		No data.	No data.	No data.
67	-68-5	Dimethyl sulfoxide	anhydrous	No data.	No data.	No data.
8.2	Exposu	re Controls:		Į		
8.2.1	Engine (Ventila	ering Controls	•	res, local exhaust ventil	ation or other engineering of	
1		ation etc.).	levels below recomm	ended exposure limits.		ontrols to control airborne
8.2.2	Person	al protection equi				ontrols to control airborne
8.2.2	Eye Pro	al protection equi	pment: Safety glasses	ended exposure limits.		ontrols to control airborne
8.2.2	Eye Pro Protect	al protection equi otection: ive Gloves:	oment: Safety glasses Compatible chemica	ended exposure limits.		ontrols to control airborne
8.2.2	Eye Pro Protect Other F	al protection equi otection: ive Gloves: Protective Clothing	oment: Safety glasses Compatible chemica g:Lab coat	ended exposure limits. -resistant gloves		ontrols to control airborne
8.2.2	Eye Pro Protect Other F Respira	al protection equi otection: ive Gloves: Protective Clothing atory Equipment	oment: Safety glasses Compatible chemica g:Lab coat	ended exposure limits.		ontrols to control airborne
8.2.2	Eye Pro Protect Other F Respira (Specif	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type):	pment: Safety glasses Compatible chemical :Lab coat NIOSH approved res	ended exposure limits. -resistant gloves pirator, as conditions wa		ontrols to control airborne
8.2.2	Eye Pro Protect Other F Respira (Specif Work/H	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type): ygienic/Maintenar	pment: Safety glasses Compatible chemical Lab coat NIOSH approved res	ended exposure limits. -resistant gloves pirator, as conditions wa	arrant.	
8.2.2	Eye Pro Protect Other F Respira (Specif	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type): ygienic/Maintenar	pment: Safety glasses Compatible chemical Lab coat NIOSH approved res	ended exposure limits. -resistant gloves pirator, as conditions wa		
8.2.2	Eye Pro Protect Other F Respira (Specif Work/H	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type): ygienic/Maintenar	pment: Safety glasses Compatible chemical Lab coat NIOSH approved res Do not take internally Facilities storing or u	ended exposure limits. -resistant gloves pirator, as conditions wa /. tilizing this material shot	arrant.	
8.2.2	Eye Pro Protect Other F Respira (Specif Work/H	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type): ygienic/Maintenar	pment: Safety glasses Compatible chemical g:Lab coat NIOSH approved res Do not take internally Facilities storing or u shower.	ended exposure limits. -resistant gloves pirator, as conditions wa /. tilizing this material shot	arrant.	
8.2.2	Eye Pro Protect Other F Respira (Specif Work/H	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type): ygienic/Maintenar	pment: Safety glasses Compatible chemical Lab coat NIOSH approved res Do not take internally Facilities storing or u shower. Wash thoroughly after	ended exposure limits. -resistant gloves pirator, as conditions wa /. tilizing this material shot	arrant.	
8.2.2	Eye Pro Protect Other F Respira (Specif Work/H	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type): ygienic/Maintenar	pment: Safety glasses Compatible chemical Lab coat NIOSH approved res Do not take internally Facilities storing or u shower. Wash thoroughly after	ended exposure limits. -resistant gloves pirator, as conditions wa /. tilizing this material shot	arrant.	
8.2.2	Eye Pro Protect Other F Respira (Specif Work/H	al protection equi otection: ive Gloves: Protective Clothing atory Equipment y Type): ygienic/Maintenar	pment: Safety glasses Compatible chemical Lab coat NIOSH approved res Do not take internally Facilities storing or u shower. Wash thoroughly after	ended exposure limits. -resistant gloves pirator, as conditions wa /. tilizing this material shot	arrant.	



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9.1		
) .1	Se	ection 9. Physical and Chemical Properties
	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:	89.00 C Method Used: Closed Cup
	Evaporation Rate:	No data.
	Flammability (solid, gas):	No data available.
	Explosive Limits:	LEL: 3.5% at 25.0 C UEL: 42.0% at 25.0 C
	Vapor Pressure (vs. Air or	mm 0.37 MM_HG at 20.0 C
	Hg):	
	Vapor Density (vs. Air = 1)	: No data.
	Specific Gravity (Water = 1	1): No data.
	Solubility in Water:	No data.
	Autoignition Pt:	215.00 C
9.2	Other Information	
	Percent Volatile:	No data.
		Section 10. Stability and Reactivity
10.1	Reactivity:	No data available.
10.2	•	Unstable [] Stable [X]
10.3	-	Stable if stored in accordance with information listed on the product insert.
		Will occur [] Will not occur [X]
10.4	-	heat, flames and sparks
10.5	Incompatibility - Materials	-
		phosphorus halides
		strong acids
		alkali metals
		strong oxidizing agents
		strong reducing agents
10.6	Hazardous	carbon monoxide
	Decomposition or	carbon dioxide
	Byproducts:	sulfur oxides



Revision: 05/03/2015 Supersedes Revision: 03/28/2011

	CHEMICAL					S	upersedes Revis	sion: 03/28/201	
L			Sectio	n 11. Toxicological	l Informa	ation			
11.1	Information on Toxicological Effects: Chronic Toxicological Effects:		DMSO - Tox (mouse): 7,9 Inhalation LC DMSO - Irrit DMSO - Inve Only select I See actual e DMSO RTEC	gical effects of this product h icity Data: Oral LD50 (rat): 14 20 mg/kg; Skin LD50 (mouse C50 (rat): >1,600 mg/m3 (4h) ation Data: Eyes (rabbit): 100 estigated as a mutagen, repro Registry of Toxic Effects of C ntry in RTECS for complete in CS Number: PV6210000	4,500 mg/kg e): 50,000 m ;) mg mild; Sl oductive effe hemical Sub information.	; Skin LD50 (ra g/kg; Skin TDI kin (rabbit): 50 ector, and tumo ostances (RTE	at): 40,000 mg LO (woman): 1 0 mg (24h) mil prigen.	,800 mg/kg; d;	
Carcinogenicity:		NTP? No	IARC Monographs? No	OSHA Regulated? No					
CAS			ponents (Ch	emical Name)	NTP	IARC	ACGIH	OSHA	
		nin Substrate			n.a.	n.a.	n.a.	n.a.	
67	7-68-5 Dir	nethyl sulfoxid	-		n.a.	n.a.	n.a.	n.a.	
			Secti	on 12. Ecological I	nformat	ion			
12.1	Toxicity:		Avoid release into the environment.						
			Runoff from fire control or dilution water may cause pollution.						
12.2	Persistence		No data ava	lable.					
	Degradabilit	-	N I I (
12.3	Bioaccumul Potential:	ative	No data ava	lable.					
12.4	Mobility in S		No doto ovo	labla					
12.4	-		No data available. 3 No data available.						
12.5	assessment		NU Udla ava						
12.6	Other advers		No data ava	ilable.					
			Sectio	n 13. Disposal Co	nsiderat	ions			
13.1	Waste Dispo	osal Method:		ccordance with local, state, a					
			•	ion 14. Transport I		0			
L 14.1		ISPORT (US I							
	OT Proper Sh	-	-	gerous goods.					
	OT Hazard Cl		Not duri						
U	IN/NA Number	1							
14.1	LAND TRAM	SPORT (Euro	opean ADR/R	ID):					
A	DR/RID Shipp	ing Name:	Not dan	gerous goods.					
U	IN Number:								
н	lazard Class:								
14.3	AIR TRANS	PORT (ICAO/I	ATA):						
IC	CAO/IATA Shi	pping Name:	Not dan	gerous goods.					
	tional Transpo mation:	ort	Transport in	accordance with local, state	, and federa	l regulations.			



		Section 15. Regu	latory Inform	ation		
EPA SARA (Su	perfund Amendm	nents and Reauthorization Act	of 1986) Lists			
CAS # Hazardous Com		ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
NA	Renin Substrate		No	No	No	
67-68-5 Dimethyl sulfoxide		e, anhydrous	No	No	No	
CAS #	Hazardous Com	ponents (Chemical Name)	Other US EPA or State Lists			
NA Renin Substrate			CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No			
67-68-5 Dimethyl sulfoxid		e, anhydrous	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; 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. Otl	ner Informatio	on		
Revision Date:		05/03/2015				
	rmation About	No data available.				
his Product:	······································					
		use. Users should make their of their particular purposes.	own investigations to	determine the suit	adility of the information f	