

Cayman			90-11	en Cover Sne		Revision: 08/01/2016 Supersedes Revision: 04/20/2016		
		acco	ording to Regulation (EC) No. 190	7/2006 as amended b	oy (EC) No. 1272/200	)8		
		Section 1. I	dentification of the Substar	ce/Mixture and of	the Company/U	ndertaking		
1.1	Product Product		400012 96-Well Cover Sheet					
1.2	Relevan	t identified uses of	the substance or mixture a	nd uses advised a	against:			
	Releva	ant identified uses:	For research use only, no	ot for human or vete	erinary use.			
1.3	Details o	of the Supplier of t	he Safety Data Sheet:					
	Compa	any Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	any				
	Web s	ite address:	www.caymanchem.com					
	Inform	ation:	Cayman Chemical Comp	any	+1 (73	4)971-3335		
1.4	Emerge	ncy telephone num	nber:					
	Emerg	ency Contact:	CHEMTREC Within USA			0)424-9300		
			CHEMTREC Outside US	A and Canada:	+1 (70	3)527-3887		
			Section 2. Ha	zards Identifi	cation			
2.1	Classification of the Substance or Mixture:							
2.2	Label Elements:							
	GHS F Based GHS F No phr GHS F	Fignal Word: Hazard Phrases: on evaluation of cu Precaution Phrases rases apply. Response Phrases rases apply.		stance or mixture is	not classifiable ac	cording to GHS.		
	GHS Storage and Disposal Phrases:							
	Please	e refer to Section 7 f	or Storage and Section 13 for	Disposal information	on.			
2.3	Effects and Symptoms: May be harmful by inhalation, May cause eye, skin, or respi			, ingestion, or skin a iratory system irritat	absorption. tion.	spiratory tract. been thoroughly investigated.		
		Secti	on 3. Composition	/Information	on Ingredie	nts		
		Hazardous Components (Chemical Name)/ REACH Registration No.		Concentration	EC No./ EC Index No.	GHS Classification		
NA NA		96-Well Cover Sheet		100.0 %	NA NA	No data available.		



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		Section 4. First Aid Measures
4.1	Description of First Aid	
	Measures:	
	In Case of Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
	In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
	In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined 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:	A solid water stream may be inefficient.
5.2	Flammable Properties an Hazards:	ndNo 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	<b>s:</b> As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
		Section 6. Accidental Release Measures
6.1	Protective Precautions,	Avoid raising and breathing dust, and provide adequate ventilation.
	Protective Equipment an Emergency Procedures:	<b>d</b> 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).
6.2	Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.
6.3	Methods and Material Fo	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 Taken	Avoid breathing dust/fume/gas/mist/vapours/spray.
	in Handling:	Avoid prolonged or repeated exposure.
7.2		Keep container tightly closed.
	in Storing:	Store in accordance with information listed on the product insert.
	Sec	tion 8. Exposure Controls/Personal Protection
8.1	Exposure Parameters:	



<ul> <li>8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne (Ventilation etc.): levels below recommended exposure limits.</li> <li>8.2.2 Personal protection equipment:</li> <li>Eye Protection: Safety glasses</li> <li>Protective Glorinic: Jab coal</li> <li>Respiratory Equipment NIOSH approved respirator, as conditions warrant.</li> <li>(Specify Type):</li> <li>Work/Hygieni/Maintenan Do not take internally.</li> <li>ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower Wash thoroughly after handling.</li> <li>No data available.</li> </ul> 94. Work/Hygieni/Maintenan Do not take internally. ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower Wash thoroughly after handling. No data available. 94. Work/Hygieni/Maintenan Do not take internally. ce Practices: Facilities a full fundio (X) Solid Apparance and Odor: 96-Well Cover Sheet phi: No data. Boiling Point: No data. Boiling Point: No data. Boiling Point: No data. Vapor Density (vs. Air er 1): No data. Specific Gravity (Water = No data. Specific Gravity (Water		HEMICAL	Supersedes Revision: 04/20/2016
(ventilation etc.):       levels below recommended exposure limits.         5.2.2       Personal protection equipment:         Eve Protective Gloves:       Compatible chemical-resistant gloves         Other Protective Clothing:Lab coal       Respiratory Equipment         Respiratory Equipment       NOSH approved respirator, as conditions warrant.         (Specify Type):       WorkHygleniz/Maintenan Do not take internally.         ce Practices:       Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower Wash throroughly after handling.         No data available.       Section 9. Physical and Chemical Properties         Physical States:       [] Gas         Physical States:       [] Gas         pt:       No data.         Molting Point:       No data.         No data.       UEL: No data.         Vapor Pressure (vs. Air or mm       No data.         Vapor Pressure (vs. Air or mm       No data.         Soldition Pressure (vs. Air or mm       No data.         Soldition Pressure (vs. Air or mm       No data.         Other Information       No data.         Soldition Protective       No data.         Use of forwity (Water = 1):       No data.         Use of formation       No data.         Use of formation       N	8.2	Exposure Controls:	
<ul> <li>Bazz Personal protection equipment: Eye Protection: Safety disesses Protective Gloves: Compatible chemical-resistant gloves Other Protective Clothing:Lab coat Respiratory Equipment NIOSH approved respirator, as conditions warrant. (Specify Type): Work/Hygieniz/Mainteana Do not take internally. cs Practices: Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower Wash throughly after handling. No data available.</li> <li>Section 9. Physical and Chemical Properties Physical States: []Gas []Liquid [X]Solid Appearance and Odor: 96-WellCover Sheet ph: No data.</li> <li>Mo data.</li> <li>Physical States: No data.</li> <li>Physical States: No data.</li> <li>Boiling Point: No data.</li> <li>Boiling Point: No data.</li> <li>Flash Pt: No data.</li> <li>Fayaporation Rate: No data.</li> <li>Fayaporation Rate: No data.</li> <li>Fayaporation Rate: No data.</li> <li>Flash Pt: No data.</li> <li>Vapor Pressure (vs. Air er 1): No data.</li> <li>Solubility in Water: No data.</li> <li>Solubility in Water: No data.</li> <li>Solubility in Water: No data.</li> <li>Coefficient: Autogintion Pt: No data.</li> <li>Coefficient: No data.</li> <li>Stable if stored in accordance with information listed on the product insert.</li> <li>Polymentzation: Will occur [] Will not occur [X]</li> <li>Conditions To Avoid: No data available.</li> </ul>	8.2.1	Engineering Controls	
Eye Protection:       Safety glasses         Protective Gloves:       Compatible chemical-resistant gloves         Other Protective Gloving::Lab coat         Respiratory Equipment       NIOSH approved respirator, as conditions warrant.         (Specify Type):         Work/Hygienic/Maintenan Do not take internally.         ce Practices:       Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower         Wark/Hygienic/Maintenan       No not take internally.         ce Practices:       Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower         Wark/Hygienic/Maintenan       No not take internally.         ce Practices:       Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower         Wark/Hysional States:       []Cas         Physical States:       []Cas         Physical States:       []Cas         No data.       []Solid         Appearance and Odor:       No data.         Boiling Point:       No data.         Boiling Point:       No data.         Use prosesure (vs. Air or mm       No data.         Vapor Pressure (vs. Air or mm       No data.         Solubility in Water:       No data.         Octanel/Water Partition       No data.		(Ventilation etc.):	levels below recommended exposure limits.
Protective Gloves:       Compatible chemical-resistant gloves:         Other Protective Clothing:Lab.cott         Respiratory Equipment       NIOSH approved respirator, as conditions warrant.         (Specify Type):         Work/Hygienic/Maintenan Do not take internally         ce Practices:       Facilities strong or utilizing this material should be equipped with an eyewash and a safety shower         Wash thoroughly after handling       No data available.         Physical States:       [] Cass         Physical States:       [] Cass         pit:       No data.         Boiling Point:       No data.         Boiling Point:       No data.         Explosive Limits:       LEL: No data.         Explosive Limits:       LEL: No data.         Hig:       Wapor Density (vs. Air or mm         Vapor Pressure (vs. Air or mm       No data.         State:       No data.         State:       No data.         State:       No data.         State:       No data.         Usport Pressure (vs. Air or mm       No data.         State:       No data.         Ceefficient:       No data.         Autoignition Pt:       No data.         Decomposition Temperature:       No data.	8.2.2	Personal protection equi	pment:
Other Protective Clothing: Lab cost         Respiratory Equipment       NIOSH approved respirator, as conditions warrant.         (Specify Type):         Work/Hygienic/Maintenan Do not take internally.         ce Practices:       Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower Wash thoroughly after handling.         No data available.         Section 9. Physical and Chemical Properties         Physical States:       []Gas []]Lquid [X] Solid         Appearance and Odor:       96-Well Cover Sheet         pl:       No data.         Beiling Point:       No data.         Boiling Point:       No data.         Explosive Limits:       LEL: No data.         Explosive Limits:       LEL: No data.         Vapor Density (vs. Air or mn       No data.         Meling Point:       No data.         Yapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Octano/Water Partition       No data.         Octano/Water Partition       No data.         Decomposition Temperature:       No data.         Option Information       Percent Volatile:         Percent Volatile:       No data.         Other Information       Percent Volatile:      <		Eye Protection:	Safety glasses
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(Specify Type):       Work/Hygienic/Maintenan Do not take internally.         ce Practices:       Facilities strong or utilizing this material should be equipped with an eyewash and a safety shower Wash thoroughly after handling.         No data available.       Section 9. Physical and Chemical Properties         Physical States:       [ Gas [ ] Liquid [X] Solid         Appearance and Odor:       96-Well Cover Sheet         pH:       No data.         Boiling Point:       No data.         Boiling Point:       No data.         Plash Pt:       No data.         Flash Pt:       No data.         Explosive Limits:       LEL: No data.         Explosive Limits:       LEL: No data.         Yapor Pressure (vs. Air or mm       No data.         Solubility in Water:       No data.         Solubility in Water:       No data.         Solubility in Water:       No data.         Coefficient:       Autoignition Pt:         Autoignition Pt:       No data.         Decomposition Temperature:       No data.         Precent Volatile:       No data.         Other Information       Percent Volatile.         Percent Volatile:       No data.         Other Information       Percent Volatile if stored in accordance with information litsted on the		Other Protective Clothing	:Lab coat
Work/Hygienic/Maintenan       Do not take internally.         ce Practices:       Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower Wash thoroughly after handling.         No data available.         21       Information on Basic Physical and Chemical Properties         Physical States:       []Gas [] Liquid [X] Solid         Appearance and Odor:       96-Well Cover Sheet         pH:       No data.         Meiting Point:       No data.         Billing Point:       No data.         Flash Pt:       No data.         Evaporation Rate:       No data.         Playsoration Rate:       No data.         Evaporation Rate:       No data.         Hig:       No data.         Yapor Pressure (vs. Air or mm       No data.         Hg::       No data.         Yapor Density (vs. Air = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Decomposition Temperature:       No data.         Outer Information       Percent Volatile:         Percent Volatile:       No data.         Outer Information       Percent Volatile:         P		<b>Respiratory Equipment</b>	NIOSH approved respirator, as conditions warrant.
ce Practices:       Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower Wash thoroughly after handling.         No data available.         Section 9. Physical and Chemical Properties         Physical States:       []Gas         Physical States:       No data.         Boiling Point:       No data.         Evaporation Rate:       No data.         Evaporation Rate:       No data.         Evaporation Rate:       No data.         Uspor Density (vs. Air = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Decomposition Temperature:       No data.         Viscosity:       No data		(Specify Type):	
Wash thoroughly after handling. No data available.         Section 9. Physical and Chemical Properties         Physical States:       []Gas []Liquid [X]Solid         Appearance and Odor:       96-Well Cover Sheet         pH:       No data.         Boiling Point:       No data.         Boiling Point:       No data.         Flash P1:       No data.         Exposive Limits:       LE: No data.         Fammability (solid, gas):       No data.         Hig:       Vapor Pressure (vs. Air or mm         Vapor Pressure (vs. Air or mm       No data.         Hg:       Vapor Density (vs. Air = 1):         Vapor Density (vs. Air = 1):       No data.         OctanolWater Partition       No data.         OctanolWater Partition       No data.         Viscosity:       No data.         Decomposition Temperature:       No data.         Decomposition Temperature:       No data.         Disto Iter Inform		Work/Hygienic/Maintenar	Do not take internally.
2.1       Information on Basic Physical and Chemical Properties         Physical States:       []Gas       []Liquid         Yi Solid       Appearance and Odor:       96-Well Cover Sheet         pH:       No data.         Metting Point:       No data.         Boiling Point:       No data.         Flash Pt:       No data.         Flash Pt:       No data.         Flash Pt:       No data.         Explosive Limits:       LEL: No data.         Vapor Pressure (vs. Air or mm       No data.         Vapor Pressure (vs. Air or nm       No data.         Specific Gravity (Water = 1):       No data.         Ottano/Water Parition       No data.         Octano/Water Parition       No data.         Otterno/Water Parition       No data.         Otterno/Water Parition       No data.         Otterno/Water Parition       No data.         Otterno/Water Pariton       N		ce Practices:	Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
Section 9. Physical and Chemical Properties         Physical States:       []Gas       []Liquid       [X]Solid         Appearance and Odor:       96-Well Cover Sheet       96-Well Cover Sheet         pH:       No data.       96-Well Cover Sheet         pH:       No data.       96-Well Cover Sheet         pH:       No data.         Boiling Point:       No data.         Evaporation Rate:       No data.         Flarsmability (solid, gas):       No data.         Flarsmability (solid, gas):       No data.         Vapor Oressure (vs. Air or mm       No data.         Hg):       ULL: No data.         Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         OctanolWater Paritition       No data.         OctanolWater Paritition       No data.         OctanolWater Paritition       No data.         Decomposition Temperature:       No data.         Viscosity:       No data.         Decomposition Temperature:       No data.         Ditter Information       Pacent Volatile:         No data available.       []         Ditter Information:       Yill not court [X]         No data available.       []			Wash thoroughly after handling.
2.1       Information on Basic Physical and Chemical Properties         Physical States:       []Gas       []Liquid       [X]Solid         Appearance and Odor:       96-Well Cover Sheet       9         pH:       No data.       Metting Point:       No data.         Boiling Point:       No data.       No data.         Flash Pt:       No data.       Evaporation Rate:       No data.         Flammability (solid, gas):       No data.       UEL: No data.         Vapor Pressure (vs. Air or mm       No data.       UEL: No data.         Vapor Pressure (vs. Air or mm       No data.       UEL: No data.         Vapor Density (vs. Air = 1):       No data.       Solubility in Water:       No data.         Solubility in Water:       No data.       Octano/Water Partition       No data.         Coeffic Gravity (Water = 1):       No data.       Octano/Water Partition       No data.         Decomposition Temperature:       No data.       Octano/Water Partition       No data.         Solubility:       No data.       Social.       Social.       Social.         Viscosity:       No data.       Social.       Social.       Social.         Different:       No data.       Social.       Social.       Social.			No data available.
2.1       Information on Basic Physical and Chemical Properties         Physical States:       []Gas       []Liquid       [X]Solid         Appearance and Odor:       96-Well Cover Sheet       9         pH:       No data.       Metting Point:       No data.         Boiling Point:       No data.       No data.         Flash Pt:       No data.       Evaporation Rate:       No data.         Flammability (solid, gas):       No data.       UEL: No data.         Vapor Pressure (vs. Air or mm       No data.       UEL: No data.         Vapor Pressure (vs. Air or mm       No data.       UEL: No data.         Vapor Density (vs. Air = 1):       No data.       Solubility in Water:       No data.         Solubility in Water:       No data.       Octano/Water Partition       No data.         Coeffic Gravity (Water = 1):       No data.       Octano/Water Partition       No data.         Decomposition Temperature:       No data.       Octano/Water Partition       No data.         Solubility:       No data.       Social.       Social.       Social.         Viscosity:       No data.       Social.       Social.       Social.         Different:       No data.       Social.       Social.       Social.		S	ection 9 Physical and Chemical Properties
Physical States:       []Gas       []Liquid       [X] Solid         Appearance and Odor:       96-Well Cover Sheet         pH:       No data.         Metting Point:       No data.         Boiling Point:       No data.         Flash Pt:       No data.         Flash Pt:       No data.         Flash Pt:       No data.         Flash Pt:       No data.         Flammability (solid, gas):       No data. available.         Explosity Limits:       EE:         Vapor Pressure (vs. Air or mm       No data.         Vapor Pressure (vs. Air or mm       No data.         Vapor Density (vs. Air = 1):       No data.         Vapor Obersity (vs. Air = 1):       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Viscosity:       No data.         Viscosity:       No data.         Decomposition Temperature:       No data.         Viscosity:       No data.         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability Note(s):       Stable [ stored in accordance with inf	0 1		· · ·
Appearance and Odor:       96-Well Cover Sheet         pt:       No data.         pt:       No data.         Moting Point:       No data.         Boiling Point:       No data.         Flash Pt:       No data.         Evaporation Rate:       No data.         Vapor Pressure (vs. Air or mm       No data.         Vapor Pensity (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Cotanol/Water Partition       No data.         Cotanol/Water Partition       No data.         Octanol/Water Partition       No data.         Viscosity:       No data.         Viscosity:       No data.         Viscosity:       No data.         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability Note(s):       Stable [ 1]       Stab	3.1	-	
pH:       No data.         Melting Point:       No data.         Boiling Point:       No data.         Flash Pt:       No data.         Evaporation Rate:       No data.         Evaporation Rate:       No data.         Explosive Limits:       LEL: No data.         Explosive Limits:       LEL: No data.         Vapor Pressure (vs. Air or mm       No data.         Hg):       Vapor Density (vs. Air = 1):         Vapor Density (vs. Air = 1):       No data.         Solubility in Water:       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Outer Information       Percent Volatile:         Percent Volatile:       No data.         Viscosity:       Unstable[]         Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will not occur[X]         No data available.       No data available.         10.5       Incompatibility - Materials No data available.         10.6       Hezardous       No data available.		-	
Metting Point:       No data.         Boiling Point:       No data.         Flash Pt:       No data.         Flash Pt:       No data.         Flamability (solid, gas):       No data.         Explosive Limits:       LEL: No data.         UEL: No data.       UEL: No data.         Vapor Pressure (vs. Air or mm       No data.         Hg):       Vapor Pressure (vs. Air or mm         Vapor Density (vs. Air = 1):       No data.         Solubility in Water:       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Decomposition Temperature:       No data.         Viscosity:       No data.         Viscosity:       No data.         Percent Volatile:       No data.         Viscosity:       No data available.         10.2       Stability Note(s):       Stable [ ]         Vill occur [ ]       Will not occur [ X ]         10.4       Conditions To Avoid:         No data available.       In			
Boiling Point:       No data.         Flash Pt:       No data.         Evaporation Rate:       LEL: No data.         Vapor Pressure (vs. Air or mn       No data.         Specific Gravity (Water = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Solubility in Water:       No data.         Coefficient:       No data.         Autoignition Pt:       No data.         Viscosity:       No data.		•	
Flash Pt:       No data.         Flash Pt:       No data.         Evaporation Rate:       No data.         Explosive Limits:       LEL: No data.         UEL: No data.       UEL: No data.         Vapor Pressure (vs. Air or mm       No data.         Hg):       Vapor Density (vs. Air = 1):       No data.         Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.       Solubility in Water:       No data.         Solubility in Water:       No data.       OctanolWater Partition       No data.         OctanolWater Partition       No data.       OctanolWater Partition       No data.         Outer Information       No data.       No data.       OctanolWater Partition       No data.         10.2       Other Information       Percent Volatile:       No data available.       No data available.         10.2       Stability Note(s):       Stable [ 1]       Stable [ 3]       Stable [ 5]       No data avai		-	
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.       UEL: No data.         Vapor Dressity (vs. Air = 1):       No data.       Vapor		•	
Flammability (solid, gas):       No data available.         Explosive Limits:       LEL: No data.         Vapor Pressure (vs. Air or mm       No data.         Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Specific Gravity (Water = 1):       No data.         Specific Gravity (Water = 1):       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Decomposition Temperature:       No data.         Viscosity:       No data.         Decomposition Temperature:       No data.         Decomposition Temperature:       No data.         Viscosity:       No data.         Decomposition Temperature:       No data.         Decomposition Temperature:       No data.         Difficient:       No data.         Decomposition Temperature:       No data.         Difficient:       No data.         Difficient:       No data available.         Difficient:       No data available.         Difficient:       No data available.         Difficient:       <			
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.         Octanol/Water Partition       No data.         Decomposition Temperature:       No data.         Viscosity:       No data.         Other Information       Percent Volatile:         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability Note(s):       Stable [ ]         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:       No data available.         10.5       Incompatibility - Materials No data available.       To Avoid:         10.6		-	
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.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Coefficient:       No data.         Autoignition Pt:       No data.         Decomposition Temperature:       No data.         Viscosity:       No data.         Viscosity:       No data.         Percent Volatile:       No data.         Stability:       Unstable.         10.2       Stability:         Unstable []       Stable [X]         10.3       Stability Note(s):         Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []         Will not occur [X]       No data available.         10.4       Conditions To Avoid:       No data available.         10.5       Incompatibility - Materials No data available.       To Avoid:         10.6       Hazardous       No data available.			
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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:       No data available.         10.5       Incompatibility - Materials No data available.         To Avoid:       No data available.         10.6       Hazardous       No data available.			Section 10. Stability and Reactivity
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10.6 Hazardous No data available.			
	10.6		No data available.
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Multi-region format

Revision: 08/01/2016 Supersedes Revision: 04/20/2016

	Decomp Byprodi	oosition or					
	,		Section 11. Toxico	ological Info	rmation		
11.1							
CAS	#	Hazardous Com	ponents (Chemical Name)	NTF	P IARC	ACGIH	OSHA
	NA	96-Well Cover Sh	neet	n.a.	n.a.	n.a.	n.a.
			Section 12. Ecol	ogical Inform	nation		
12.1	Toxicity		Avoid release into the environr Runoff from fire control or dilut No data available.		use pollution.		
12.2	Degrada	ence and	no data avaliable.				
12.3		imulative	No data available.				
12.4	Mobility	in Soil:	No data available.				
12.5	Results assessr		No data available.				
12.6	Other a	dverse effects:	No data available.				
			Section 13. Dispo	sal Conside	erations		
13.1	Waste D	isposal Method:	Dispose in accordance with loc	al, state, and fed	eral regulations.		
			Section 14. Trar	nsport Inform	nation		
14.1	LAND 1	RANSPORT (US I		•			
		er Shipping Name	-				
	IN/NA Nur						
14.1		RANSPORT (Euro	opean ADR/RID):				
		hipping Name:	Not dangerous goods.				
-	lazard Cla						
14.3	AIR TR	ANSPORT (ICAO/	IATA):				
10	ICAO/IATA Shipping Name: Not dangerous goods						
Addi	tional Tra	nsport	Transport in accordance with I	ocal, state, and fe	deral regulations.		
Infor	mation:						
			Section 15. Regu	latory Infor	mation		
EPA	SARA (Sı	perfund Amendm	nents and Reauthorization Act	of 1986) Lists			
CAS	CAS # Hazardous C		ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 31	3 (TRI)
	NA	96-Well Cover Sh	neet	No	No	No	
CAS	#	Hazardous Com	ponents (Chemical Name)	Other US EPA	or State Lists		
	NA	96-Well Cover Sh	neet	CAA HAP,OD PROP.65: No	C: No; CWA NPD	ES: No; TSCA	No; CA



Page: 5 of 5

Cayman	Supersedes Revision: 04/20/2016				
Regulatory Information Statement:	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.				
	Section 16. Other Information				
<b>Revision Date:</b> 08/01/2016					
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.				



# SAFETY DATA SHEET Polysorbate 20

Revision: 08/01/2016 Supersedes Revision: 04/19/2016

	acc	cording to Regulation (EC) No. 1907/2006 as amended by (	(EC) No. 1272/2008
	Section 1.	Identification of the Substance/Mixture and of the	ne Company/Undertaking
.1	Product Code:	400035	
	Product Name:	Polysorbate 20	
	Synonyms:	Tween 20™;	
.2	Relevant identified uses of	of the substance or mixture and uses advised aga	ainst:
	Relevant identified uses	s: For research use only, not for human or vetering	nary 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 nu	mber:	
	Emergency Contact:	CHEMTREC Within USA and Canada:	+1 (800)424-9300
		CHEMTREC Outside USA and Canada:	+1 (703)527-3887
		Section 2. Hazards Identifica	ation
2.1 2.2	Classification of the Subs Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements:	ye Irritation, Category 2A	
	Serious Eye Damage/E Skin Sensitization, Cate	ye Irritation, Category 2A	
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word:	ye Irritation, Category 2A	
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases:	ye Irritation, Category 2A egory 1 Warning	
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle	ye Irritation, Category 2A egory 1 Warning orgic skin reaction.	
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /e irritation.	
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /e irritation.	
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase P261: Avoid breathing {d	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /e irritation. es: lust/fume/gas/mist/vapors/spray}.	
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase P261: Avoid breathing {d P264: Wash {hands} thor	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /e irritation. /es: lust/fume/gas/mist/vapors/spray}. roughly after handling.	Э.
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase P261: Avoid breathing {d P264: Wash {hands} thor P272: Contaminated wor	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /e irritation. es: lust/fume/gas/mist/vapors/spray}.	
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	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase P261: Avoid breathing {d P264: Wash {hands} thor P272: Contaminated wor P280: Wear {protective g GHS Response Phrases P302+352: IF ON SKIN:	ye Irritation, Category 2A egory 1 Warning rrgic skin reaction. //e irritation. es: lust/fume/gas/mist/vapors/spray}. roughly after handling. /k clothing should not be allowed out of the workplace ploves/protective clothing/eye protection/face protection	on}.
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	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase P261: Avoid breathing {d P264: Wash {hands} thor P272: Contaminated wor P280: Wear {protective g GHS Response Phrase P302+352: IF ON SKIN: P305+351+338: IF IN EY to do. Continue rinsing. P333+313: If skin irritatio	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /e irritation. es: lust/fume/gas/mist/vapors/spray}. roughly after handling. k clothing should not be allowed out of the workplace ploves/protective clothing/eye protection/face protection s: Wash with plenty of soap and water. /ES: Rinse cautiously with water for several minutes.	on}.
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	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase P261: Avoid breathing {d P264: Wash {hands} thor P272: Contaminated wor P280: Wear {protective g GHS Response Phrase P302+352: IF ON SKIN: P305+351+338: IF IN EY to do. Continue rinsing. P333+313: If skin irritatio P337+313: If eye irritatio P362+364: Take off cont	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /// erritation. /// erritation. /// erritation. /// erritation. // erritation.	on}.
	Serious Eye Damage/Ey Skin Sensitization, Cate Label Elements: GHS Signal Word: GHS Hazard Phrases: H317: May cause an alle H319: Causes serious ey GHS Precaution Phrase P261: Avoid breathing {d P264: Wash {hands} thor P272: Contaminated wor P280: Wear {protective g GHS Response Phrase P302+352: IF ON SKIN: P305+351+338: IF IN EY to do. Continue rinsing. P333+313: If skin irritatio P337+313: If eye irritatio P362+364: Take off conta	ye Irritation, Category 2A egory 1 Warning ergic skin reaction. /// erritation. /// erritation. /// erritation. /// erritation. // erritation.	on}. Remove contact lenses, if present and easy

medical personnel.         Section 5. Fire Fighting Measures         5.1       Suitable Extinguishing       Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.         Media:       Use water spray to cool fire-exposed containers.         Unsuitable Extinguishing       A solid water stream may be inefficient.         Media:       Section 5. Fire Fighting Measures.         Unsuitable Extinguishing         A solid water stream may be inefficient.         Media:       Section 5. Fire Fighting Measures.         Section 5. Fire Fighting Neasures.         Unsuitable Extinguishing       A solid water stream may be inefficient.         Media:       Section 5.         Section 5. Fire Fighting No data available.         Hazards:       No data.         No data.         Explosive Limits:       LEL: No data.         Autoignition Pt:       No data.         Section 5. Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or				SAFE	TY DATA SH	EET		Page: 2 of 5	
2.3       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 an allergic skin reaction. May cause skin or 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 Namey/ RECAC Registration No.         REACH Registration No.         Bootoneuts (Chemical Namey/ EC Index No.         B	Car	man		Po	lysorbate 20		Revision:	08/01/2016	
Effects and Symptoms:       Material may be initialing to the mucous membranes and upper respiratory tract.         May cause an allergic skin reaction.       May cause an allergic skin reaction.         May cause an allergic skin reaction.       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/ EC No/ EC Index No.         9005.64-5       Polycoyethyleneaothian Monolaurate (polysochate)       100.0 %       S00-018-3       No data available.         Transmotion of First Aid Measures         A 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:         Ind case of Skin Contact:         Ind case of Skin Contact:         Ind 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.         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. <td cols<="" th=""><th></th><th>Adver</th><th></th><th></th><th></th><th>Ş</th><th>Supersedes Revision:</th><th>04/19/2016</th></td>	<th></th> <th>Adver</th> <th></th> <th></th> <th></th> <th>Ş</th> <th>Supersedes Revision:</th> <th>04/19/2016</th>		Adver				Ş	Supersedes Revision:	04/19/2016
May cause skin or 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 Namey/ RECS # Hazardous Components (Chemical Namey/ 20; Sorbitan, monododecanoate, poly(oxy-1.2-ethanediyi) derivatives)       Concentration       EC No./ EC Index No.       GHS Classification         Section 4. First Aid Measures       So0-018-3 NA       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.         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. <t< td=""><td>2.3</td><td></td><td></td><td>Material may be irritating to t May be harmful by inhalation</td><td>he mucous membran a, ingestion, or skin at</td><td></td><td>spiratory tract.</td><td></td></t<>	2.3			Material may be irritating to t May be harmful by inhalation	he mucous membran a, ingestion, or skin at		spiratory tract.		
CAS #/ RTECS #         Hazardous Components (Chemical Namey/ REACH Registration No.         Concentration         EC No./ EC Index No.         GHS Classification           9005-64-5 TR7400000         Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanate, poly(oxy-1.2-ethanediyi) derivatives)         100.0 %         500-018-3 NA         No data available.           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 personnel.         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.           Solutable Extinguishing         Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.           Media:         Solutable Extinguishing A solid water stream may be inefficient.           Media:         No data available.           5.1         Suitable Extinguishing A solid water stream may be inefficient.           Media:         No data available.				May cause skin or respirator	y system irritation.	operties have not	been thoroughly in	vestigated.	
RTECS #       REACH Registration No.       EC Index No.         9005-64-5       Polyoxyethylenesorbitan Monolaurate (polysorbate 20: Sorbitan, monododecanoate, poly(oxy-1,2-sthanedity) derivatives)       100.0 %       500-018-3 NA       No data available.         Section 4. First Aid Measures         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:         In Case of Skin Contact:         In Case of Skin Contact:         In Case of Eye Contact:         Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Remove contaminated clothing. Get 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         Section 4. First 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         Section 5. Fire Fighting Network (not deta available.         Hodita avai			Sect	ion 3. Composition	/Information of	on Ingredie	nts		
TR7400000       20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyi) derivatives)       NA         Section 4. First Aid Measures         A.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         S.1         Suitable Extinguishing         Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.         Media:       Use water spray to col fire-exposed containers.         Unsuitable Extinguishing       A solid water stream may be inefficient.         Media:       No data available.         Harmable Properties andNo data available.         Hazards:       No data.		-	-		Concentration		GHS Classification	on	
<ul> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>Section 5. Fire Fighting Measures</li> <li>5.1 Suitable Extinguishing Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers. Unsuitable Extinguishing A solid water stream may be inefficient. Media:</li> <li>5.2 Flammable Properties andNo data available. Hazards: No data available. Flash Pt: No data. Explosive Limits: LEL: No data. Autoignition Pt: No data.</li> <li>5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or</li> </ul>			20; Sorbitan, monoc	dodecanoate,	100.0 %		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.         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.         Suitable Extinguishing       Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.         Media:       Use water stream may be inefficient.         Media:       No data available.         Hazards:       No data available.         Flash Pt:       No data.         Flash Pt:       No data.         Stard Spite Limits:       LEL: No data.         Autoignition Pt:       No data.         Si       Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or				Section 4. Fi	rst Aid Measu	ires			
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. Use water spray to cool fire-exposed containers. Unsuitable Extinguishing A solid water stream may be inefficient. Media: 5.2 Flammable Properties andNo data available. Hazards: No data available. Flash Pt: No data. Explosive Limits: LEL: 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	4.1	Descri	ption of First Aid						
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. 5.1 Suitable Extinguishing Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers. Unsuitable Extinguishing A solid water stream may be inefficient. Media: No data available. Hazards: No data available. Flash Pt: No data. Explosive Limits: LEL: No data. UEL: No data. Autoignition Pt: No data. 5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or						respiration or giv	ve oxygen by trained	d	
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         S.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:       No data available.         Hazards:       No data available.         Flash Pt:       No data.         Explosive Limits:       LEL: No data.         Use data.       UEL: No data.         S.3       Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or				contaminated clothing. Get m	nedical attention if syr	mptoms occur. W	ash clothing before		
unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.           Section 5. Fire Fighting Measures           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:         Vise water stream may be inefficient.           Media:         No data available.           Hazards:         No data available.           Flash Pt:         No data.           Explosive Limits:         LEL: No data.         UEL: No data.           Autoignition Pt:         No data.			-	examined and tested by medical personnel.					
<ul> <li>5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.</li> <li>5.2 Flammable Properties and No data available. Hazards: No data available.</li> <li>Flash Pt: No data.</li> <li>Explosive Limits: LEL: No data.</li> <li>Autoignition Pt: No data.</li> <li>5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or</li> </ul>		In Case	e of Ingestion:	unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by					
<ul> <li>5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.</li> <li>5.4 Media: Use water spray to cool fire-exposed containers. Unsuitable Extinguishing A solid water stream may be inefficient. Media:</li> <li>5.2 Flammable Properties and No data available. Hazards: No data available.</li> <li>Flash Pt: No data.</li> <li>Explosive Limits: LEL: No data.</li> <li>Autoignition Pt: No data.</li> <li>5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or</li> </ul>				Section 5. Fire	Fighting Mea	sures			
<ul> <li>Media:</li> <li>5.2 Flammable Properties and No data available. Hazards:</li> <li>No data available.</li> <li>Flash Pt: No data.</li> <li>Explosive Limits: LEL: No data.</li> <li>Autoignition Pt: No data.</li> <li>5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or</li> </ul>	5.1			Use alcohol-resistant foam, o	carbon dioxide, water		spray.		
Hazards:       No data available.         Flash Pt:       No data.         Explosive Limits:       LEL: No data.         Autoignition Pt:       No data.         5.3       Fire Fighting Instruction:				A solid water stream may be inefficient.					
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	5.2		-	<b>d</b> No data available.					
Explosive Limits:       LEL: No data.       UEL: No data.         Autoignition Pt:       No data.       UEL: No data.         5.3       Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or									
Autoignition Pt:       No data.         5.3       Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or						to.			
<b>5.3</b> Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or		-			UEL: NO da	la.			
equivalent), and full protective gear to prevent contact with skin and eyes.	5.3	-		: As in any fire, wear self-cont		-		proved or	



# SAFETY DATA SHEET Polysorbate 20

Revision: 08/01/2016 Supersedes Revision: 04/19/2016

		Section 6. Accidental Release Measures		
6.1	6.1 Protective Precautions, Avoid raising and breathing dust, and provide adequate ventilation.			
	Protective Equipment and	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:			
6.3	Methods and Material For	Contain spill and collect, as appropriate.		
	Containment and Cleaning	Transfer to a chemical waste container for disposal in accordance with local regulations.		
	Up:			
		Section 7. Handling and Storage		
7.1	Precautions To Be Taken	void breathing dust/fume/gas/mist/vapours/spray.		
	in Handling:	Avoid prolonged or repeated exposure.		
7.2	Precautions To Be Taken	Keep container tightly closed.		
	in Storing:	Store in accordance with information listed on the product insert.		
	Secti	ion 8. Exposure Controls/Personal Protection		
8.1	Exposure Parameters:			
8.2	Exposure Controls:			
8.2.1	Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne		
	(Ventilation etc.):	levels below recommended exposure limits.		
8.2.2	Personal protection equip	ment:		
	Eye Protection:	Safety glasses		
	Protective Gloves:	mpatible chemical-resistant gloves		
	Other Protective Clothing:	Lab coat		
	<b>Respiratory Equipment</b>	NIOSH approved respirator, as conditions warrant.		
	(Specify Type):			
	Work/Hygienic/Maintenan	Do not take internally.		
	ce Practices:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety		
		shower.		
		Wash thoroughly after handling.		
		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:	A viscous liquid		
	pH:	No data.		
	Melting Point:	No data.		
	Boiling Point:	No data.		
	Flash Pt:	No data.		
	Evaporation Rate:	No data.		
	Flammability (solid, gas):	No data available.		
	Explosive Limits:	LEL: No data. UEL: No data.		
	Vapor Pressure (vs. Air or	mm No data.		
	Hg):			
	Vapor Density (vs. Air = 1)	: No data.		
		Multi-region forma		



# SAFETY DATA SHEET Polysorbate 20

Page: 4 of 5

	HEMICAL					5	upersedes Revis	ion: 04/19/2016	
	Specific G	Fravity (Water =	1): No d	ata.					
	Solubility	in Water:	No d	ata.					
	Octanol/V	Vater Partition	No d	ata.					
	Coefficier	nt:							
	Autoigniti	on Pt:	No d	ata.					
	Decompo	sition Temperat	ure: No d	ata.					
	Viscosity	:	No d	ata.					
9.2	Other Info	rmation							
	Percent V	olatile:	N.A.						
	Molecular	Formula & Weig	ght: C58H	H114O26 1227.5					
			Secti	on 10. Stability and	Reactiv	/ity			
10.1	Reactivity	<b>/</b> :	No data ava	ilable.		•			
10.2	Stability:		Unstable [	Instable [ ] Stable [ X ]					
10.3	Stability Note(s): Stable if stored in accordance with information listed on the product insert.								
	Polymeriz	ation:	Will occur [	] Will not occur [ X ]					
10.4	Condition	s To Avoid:	No data avai						
10.5									
	.5 Incompatibility - Materials strong oxidizing agents To Avoid:								
10.6	Hazardou		carbon dioxi	de					
10.0	Decompo	_	carbon mone						
	Byproduc								
			•	· · — · · · ·					
				n 11. Toxicological					
11.1			The toxicological effects of this product have not been thoroughly studied.						
	Toxicological Effects:		Polysorbate 20 - Toxicity Data: Oral LD50 (rat): 36.7 ml/kg; Oral LD50 (mouse): >33 g/kg; Irritation						
	Chronic Toxicological		Data: Skin (human): 15 mg/3D mild;						
		oxicological	Polysorbate 20 - Investigated as a tumorigen and reproductive effector.						
	Effects:		Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.						
				20 RTECS Number: TR7400					
Carci	nogenicity:		NTP? No	IARC Monographs? No		gulated? No			
				<b>.</b>		-			
CAS		Hazardous Com			NTP	IARC	ACGIH	OSHA	
			laurate (polysorbate 20; ooly(oxy-1,2-ethanediyl)	n.a.	n.a.	n.a.	n.a.		
			Secti	on 12. Ecological I	nformati	on			
12.1	Toxicity:		Avoid releas	e into the environment.					
			Runoff from	fire control or dilution water n	nay cause po	ollution.			
12.2	Persisten	ce and	No data ava	ilable.					
	Degradab	ility:							
12.3			No data ava	ilable.					
	Potential:								
12.4	Mobility i	n Soil:	No data ava	ilable.					
12.5	Results o	f PBT and vPvB	No data ava	ilable.					
	assessme	ent:							
12.6	Other adv	erse effects:	No data ava	ilable.					
				-				Aulti-rogion forme	
							r	Iulti-region forma	



# SAFETY DATA SHEET

Page: 5 of 5

Polysorbate 20

Revision: 08/01/2016 Supersedes Revision: 04/19/2016

	Section 13. Dispos	al Considerat	ions			
isposal Method:	Dispose in accordance with loca	al, state, and federal r	egulations.			
	Section 14. Trans	sport Informat	tion			
RANSPORT (US	DOT):					
r Shipping Name	: Not dangerous goods.					
-	opean ADR/RID):					
	Not dangerous goods.					
	1474).					
-	-					
		cal, state, and federa	l regulations.			
- 1		,				
	Section 15 Regul	atory Informa	tion			
Inerfund Amonda	· · · · · · · · · · · · · · · · · · ·	•				
-		-	S. 304 RQ	S. 313 (TRI)		
		. ,		No		
(polysorbate 20;	Sorbitan, monododecanoate,					
Hazardous Com	ponents (Chemical Name)	Other US EPA or S	State Lists	•		
(polysorbate 20;	Sorbitan, monododecanoate,	bitan, monododecanoate, Inventory; CA PROP.65: No				
rmation	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.					
	Section 16. Oth	ner Information	n			
	08/01/2016					
	00/01/2010	No data available.				
rmation About						
	RANSPORT (US er Shipping Name ed Class: mber: RANSPORT (Eur shipping Name: er: ess: ANSPORT (ICAO/ Shipping Name: nsport ANSPORT (ICAO/ Shipping Name:	Disposal Method: Dispose in accordance with loca Section 14. Trans TRANSPORT (US DOT): er Shipping Name: Not dangerous goods. rd Class: mber: TRANSPORT (European ADR/RID): Shipping Name: Not dangerous goods. rr: ISS: ANSPORT (ICAO/IATA): Shipping Name: Not dangerous goods. ITransport in accordance with lo Section 15. Regul aperfund Amendments and Reauthorization Act of Hazardous Components (Chemical Name) Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives) Hazardous Components (Chemical Name) Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives) Mazardous Components (Chemical Name) Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives) Formation This SDS was prepared in accord No.1272/2008. Section 16. Oth	Disposal Method: Dispose in accordance with local, state, and federal r Section 14. Transport Informat TRANSPORT (US DOT): er Shipping Name: Not dangerous goods. rd Class: mber: TRANSPORT (European ADR/RID): shipping Name: Not dangerous goods. rr: ISS: ANSPORT (ICAO/IATA): Shipping Name: Not dangerous goods. msport Transport in accordance with local, state, and federa Section 15. Regulatory Informa Iperfund Amendments and Reauthorization Act of 1986) Lists Hazardous Components (Chemical Name) S. 302 (EHS) Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives) Hazardous Components (Chemical Name) Other US EPA or S Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives) Factor 16. Other Information Section 16. Other Information	er Shipping Name:       Not dangerous goods.         id Class:       mber:         IRANSPORT (European ADR/RID):		



Revision: 08/01/2016 Supersedes Revision: 04/20/2016

		acco	rding to Regulation (EC) No. 190	7/2006 as amended by	(EC) No. 1272/200	)8	
		Section 1. Ic	dentification of the Substan	ce/Mixture and of t	he Company/U	ndertaking	
1.1	Product Product		400046 96 Well Kit Box				
1.2	1.2 Relevant identified uses of the substance or mixture and uses advised against:						
	Releva	nt identified uses:	For research use only, no	ot for human or veteri	inary use.		
1.3	Details of the Supplier of the Safety Data Sheet:						
	Compa	any Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	any			
	Web si	te address:	www.caymanchem.com				
	Inform	ation:	Cayman Chemical Comp	any	+1 (73-	4)971-3335	
1.4       Emergency telephone number:         Emergency Contact:       CHEMTREC Within USA and Canada:         +1       (800)424-9300         CHEMTREC Outside USA and Canada:       +1         (703)527-3887							
			Section 2. Haz	zards Identific	ation		
2.1 2.2	Label El GHS S GHS H Based GHS P No phr GHS R No phr	ignal Word: lazard Phrases: on evaluation of cur Precaution Phrases rases apply. Response Phrases: rases apply. Storage and Dispos	None rently available data this subs : al Phrases:			cording to GHS.	
2.3	Please refer to Section 7 for Storage and Section 13 for Disposal information.         .3 Adverse Human Health       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 eye, skin, or respiratory system irritation.       To the best of our knowledge, the toxicological properties have not been thoroughly investigated.						
		Secti	on 3. Composition	/Information c	on Ingredie	nts	
CAS RTE	#/ CS #	Hazardous Compo REACH Registration	onents (Chemical Name)/ on No.	Concentration	EC No./ EC Index No.	GHS Classification	
NA NA		96 Well Kit Box		100.0 %	NA NA	No data available.	



Revision: 08/01/2016 Supersedes Revision: 04/20/2016

		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:	I <b>d</b> No 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	<b>s:</b> As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
		Section 6. Accidental Release Measures
6.1	Protective Precautions,	Avoid raising and breathing dust, and provide adequate ventilation.
	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 Precautions:	Take steps to avoid release into the environment, if safe to do so.
6.3	Methods and Material Fo	r Contain spill and collect, as appropriate.
	Containment and Cleanir	hgTransfer 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:	



Revision: 08/01/2016 Supersedes Revision: 04/20/2016

8.2	Exposure Controls:						
8.2.1	Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborn					
	(Ventilation etc.):	levels below recommended exposure limits.					
8.2.2	Personal protection equip	ment:					
	Eye Protection: Safety glasses						
	Protective Gloves: Compatible chemical-resistant gloves						
	Other Protective Clothing:Lab coat						
	Respiratory Equipment	NIOSH approved respirator, as conditions warrant.					
	(Specify Type):						
	Work/Hygienic/Maintenan	Do not take internally.					
	ce Practices:	Facilities storing or utilizing this material should be equipped with an eyewash and a safety showe					
		Wash thoroughly after handling.					
		No data available.					
	C						
		ection 9. Physical and Chemical Properties					
9.1	-	sical and Chemical Properties					
	Physical States:	[]Gas []Liquid [X]Solid					
	Appearance and Odor:	96 Well Kit Box					
	pH:	No data.					
	Melting Point:	No data.					
	Boiling Point:	No data.					
	Flash Pt:	No data.					
	Evaporation Rate:	No data.					
	Flammability (solid, gas):						
	Explosive Limits:	LEL: No data. UEL: No data.					
	Vapor Pressure (vs. Air o	mm No data.					
	Hg):						
	Vapor Density (vs. Air = 1						
	Specific Gravity (Water =	1): No data.					
	Solubility in Water:	No data.					
	Octanol/Water Partition	No data.					
	Coefficient:						
	Autoignition Pt:	No data.					
	Decomposition Temperat	ure: No data.					
	Viscosity:	No data.					
9.2	Other Information						
	Percent Volatile:	No data.					
		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:	No data available.					
10.5	Incompatibility - Materials	No data available.					
	To Avoid:						
10.6	Hazardous	No data available.					
		Multi-region form					



Revision: 08/01/2016 Supersedes Revision: 04/20/2016

Decomposition or **Byproducts:** Section 11. Toxicological Information 11.1 Information on The toxicological effects of this product have not been thoroughly studied. **Toxicological Effects:** CAS # Hazardous Components (Chemical Name) NTP IARC ACGIH OSHA NA 96 Well Kit Box n.a. n.a. n.a. n.a. Section 12. Ecological Information 12.1 **Toxicity:** Avoid release into the environment. Runoff from fire control or dilution water may cause pollution. 12.2 Persistence and No data available. **Degradability:** Bioaccumulative No data available. 12.3 Potential: 12.4 Mobility in Soil: No data available. Results of PBT and vPvB No data available. 12.5 assessment: No data available. 12.6 Other adverse effects: Section 13. Disposal Considerations Dispose in accordance with local, state, and federal regulations. 13.1 Waste Disposal Method: Section 14. Transport Information 14.1 LAND TRANSPORT (US DOT): Not dangerous goods. **DOT Proper Shipping Name: DOT Hazard Class: UN/NA Number:** 14.1 LAND TRANSPORT (European ADR/RID): Not dangerous goods. ADR/RID Shipping Name: **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) NA 96 Well Kit Box No No No CAS # Hazardous Components (Chemical Name) Other US EPA or State Lists NA 96 Well Kit Box CAA HAP, ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No Multi-region format



Page: 5 of 5

Regulatory InformationThis SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)Statement:No.1272/2008.						
					Section 16. Other Information	
Revision Date:	08/01/2016					
Additional Information About	No data available.					
This Product:						
	DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warrantly of merchantability or any other warrantly, 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.					



Revision: 08/19/2016

ay			Supersedes Revision: 12/09/207
	acc	ording to Regulation (EC) No. 1907/2006 as amended by (I	EC) No. 1272/2008
	Section 1.	Identification of the Substance/Mixture and of the	e Company/Undertaking
.1	Product Code: Product Name:	400060 EIA Buffer Concentrate (10X)	
2	Relevant identified uses o	f the substance or mixture and uses advised aga	iinst:
	Relevant identified uses	: For research use only, not for human or veterin	ary use.
3	Details of the Supplier of t	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 nun	nber:	
	Emergency Contact:	CHEMTREC Within USA and Canada:	+1 (800)424-9300
		CHEMTREC Outside USA and Canada:	+1 (703)527-3887
	Classification of the Subst Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements:	n, Category 2	ation
	Skin Corrosion/Irritation Serious Eye Damage/Ey	tance or Mixture: n, Category 2	ation
	Skin Corrosion/Irritation Serious Eye Damage/Ey	tance or Mixture: n, Category 2	ation
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases:	tance or Mixture: a, Category 2 re Irritation, Category 1 Danger	ation
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word:	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger	ation
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage.	ation
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio H318: Causes serious eye GHS Precaution Phrases: P264: Wash {hands} thoro	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling.	
.1	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H318: Causes serious eye GHS Precaution Phrases P264: Wash {hands} thoro P280: Wear {protective glassical series of the ser	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling. oves/protective clothing/eye protection/face protection	
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio H318: Causes serious eye GHS Precaution Phrases P264: Wash {hands} thoro P280: Wear {protective gle GHS Response Phrases	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling. oves/protective clothing/eye protection/face protection :	
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H318: Causes serious eye GHS Precaution Phrases P264: Wash {hands} thoro P280: Wear {protective generations} GHS Response Phrases P302+352: IF ON SKIN: W	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: pughly after handling. oves/protective clothing/eye protection/face protection :: Wash with plenty of soap and water.	on}.
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio H318: Causes serious eye GHS Precaution Phrases P264: Wash {hands} thoro P280: Wear {protective gla GHS Response Phrases P302+352: IF ON SKIN: W P305+351+338: IF IN EYE	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling. oves/protective clothing/eye protection/face protection :	on}.
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H318: Causes serious eye GHS Precaution Phrases: P264: Wash {hands} thoro P280: Wear {protective glue GHS Response Phrasess P302+352: IF ON SKIN: W P305+351+338: IF IN EYE to do. Continue rinsing.	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling. oves/protective clothing/eye protection/face protection :: Wash with plenty of soap and water. ES: Rinse cautiously with water for several minutes.	on}.
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio H318: Causes serious eye GHS Precaution Phrases P264: Wash {hands} thoro P280: Wear {protective gla GHS Response Phrases P302+352: IF ON SKIN: W P305+351+338: IF IN EYE to do. Continue rinsing. P310: Immediately call a F	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling. oves/protective clothing/eye protection/face protection :: Wash with plenty of soap and water. ES: Rinse cautiously with water for several minutes. POISON CENTER or doctor/physician.	on}.
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio H318: Causes serious eye GHS Precaution Phrases P264: Wash {hands} thoro P280: Wear {protective gle GHS Response Phrases P302+352: IF ON SKIN: W P305+351+338: IF IN EYE to do. Continue rinsing. P310: Immediately call a F P332+313: If skin irritation	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling. oves/protective clothing/eye protection/face protection :: Wash with plenty of soap and water. ES: Rinse cautiously with water for several minutes.	on}.
	Skin Corrosion/Irritation Serious Eye Damage/Ey Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritatio H318: Causes serious eye GHS Precaution Phrases P264: Wash {hands} thoro P280: Wear {protective gle GHS Response Phrases P302+352: IF ON SKIN: W P305+351+338: IF IN EYE to do. Continue rinsing. P310: Immediately call a F P332+313: If skin irritation	tance or Mixture: h, Category 2 re Irritation, Category 1 Danger on. e damage. s: bughly after handling. oves/protective clothing/eye protection/face protection Wash with plenty of soap and water. ES: Rinse cautiously with water for several minutes. POISON CENTER or doctor/physician. n occurs, get medical advice/attention. ted clothing and wash before re-use.	on}.



Revision: 08/19/2016 Supersedes Revision: 12/09/2015

2.3 **Adverse Human Health** Causes serious eye damage. **Effects and Symptoms:** Causes skin irritation. 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
7758-11-4 TC5580000	Potassium phosphate, dibasic	13.3 %	231-834-5 NA	No data available.
7778-77-0 TC6615500	Potassium phosphate, Monobasic	3.21 %	231-913-4 NA	No data available.
26628-22-8 VY8050000	Sodium azide	0.1 %	247-852-1 011-004-00-7	Acute Tox.(O) 2: H300 Aquatic (A) 1: H400 Aquatic (C) 1: H410
7647-14-5 VZ4725000	Sodium chloride	23.4 %	231-598-3 NA	No data available.
194491-31-1 NA	EDTA, tetrasodium salt, hydrate	0.38 %	NA NA	Acute Tox.(O) 4: H302 Eye Damage 1: H318
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	1.0 %	232-936-2 NA	Acute Tox.(O) 4: H302
7732-18-5 ZC0110000	Water	58.61 %	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.
.2	Important Symptoms and	Exposure may cause: abdominal pain, congestion in internal organs, dehydration, diarrhea,
	Effects, Both Acute and Delayed:	gastrointestinal disturbances, lowered blood pressure, nausea, and vomiting.



Revision: 08/19/2016 Supersedes Revision: 12/09/2015

		Section 5. Fire	e 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	g A solid water stream may be	e inefficient.				
	Media:	-					
5.2	Flammable Properties ar	ndNo data available.					
	Hazards:						
		No data available.					
	Flash Pt:	No data.					
	Explosive Limits:	LEL: No data.	UEL: No data.				
	Autoignition Pt:	No data.					
5.0	-						
5.3	Fire Fighting Instruction	-	tained breathing apparatus pressure-demand (I	NIOSH approved or			
		equivalent), and full protective	ve gear to prevent contact with skin and eyes.				
		Section 6. Accide	ntal Release Measures				
6.1	Protective Precautions,	Avoid breathing vapors and	I provide adequate ventilation.				
	Protective Equipment an	d As conditions warrant, wear	r a NIOSH approved self-contained breathing a	pparatus, or respirator,			
	Emergency Procedures:	and appropriate personal p	rotection (rubber boots, safety goggles, and hea	avy rubber gloves).			
6.2	Environmental	Take steps to avoid release	into the environment, if safe to do so.				
	Precautions:						
6.3	Methods and Material Fo	Methods and Material For Contain spill and collect, as appropriate.					
	Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.						
	Up:						
		Section 7. Ha	ndling and Storage				
7.1	Precautions To Be Taker	n Avoid breathing dust/fume/g	as/mist/vapours/spray.				
	in Handling:	Avoid prolonged or repeated	d exposure.				
7.2	Precautions To Be Taker	n Keep container tightly close	d.				
	in Storing:	Store in accordance with inf	ormation listed on the product insert.				
	0	(i.e. 0 <b>F</b>					
	Sec	tion 8. Exposure C	ontrols/Personal Protection				
8.1	Exposure Parameters:						
CAS	# Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations			
26628	3-22-8 Sodium azide	ACGIH TLV	CEIL: 0.29 mg/m3				
		Europe	TWA: 0.1 mg/m3	Skin Absorption			
			STEL: 0.3 mg/m3				
		France VL	TWA: 0.1 mg/m3				
			STEL: 0.3 mg/m3				
		France VL Britain EH40		Skin Absorption			



# SAFETY DATA SHEET EIA Buffer Concentrate (10X)

		Supersedes Revision: 12/09/2015			
8.2	Exposure Controls:				
8.2.1	Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne			
	(Ventilation etc.):	evels below recommended exposure limits.			
8.2.2	Personal protection equip	nent:			
	Eye Protection:	Safety glasses			
	Protective Gloves:	Compatible chemical-resistant gloves			
	Other Protective Clothing:Lab coat				
	-	NIOSH approved respirator, as conditions warrant.			
	(Specify Type):				
	Work/Hygienic/Maintenan	Do not tako internally			
		Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety			
		shower.			
		Wash thoroughly after handling.			
		No data available.			
		No data avallable.			
	Se	ction 9. Physical and Chemical Properties			
9.1	Information on Basic Physi	cal and Chemical Properties			
	Physical States:	[]Gas [X]Liquid []Solid			
	Appearance and Odor:	A clear, colorless solution			
	pH:	7.0			
	Melting Point:	No data.			
	Boiling Point:	No data.			
	Flash Pt:	No data.			
	Evaporation Rate:	No data.			
	Flammability (solid, gas):	No data available.			
	Explosive Limits:	LEL: No data. UEL: No data.			
	Vapor Pressure (vs. Air or	mm No data.			
	Hg):				
	Vapor Density (vs. Air = 1):	No data.			
	Specific Gravity (Water = 1)				
		No data.			
	Solubility in Water:				
	Octanol/Water Partition	No data.			
	Coefficient:				
	Autoignition Pt:	No data.			
	Decomposition Temperatu				
	Viscosity:	No data.			
9.2	Other Information				
	Percent Volatile:	No data.			
		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:	No data available.			
10.5	Incompatibility - Materials	strong oxidizing agents			
	To Avoid:				
10.6		hydrogen chloride gas			
		Multi-region format			
		multi-region format			



Multi-region format

Revision: 08/19/2016 Supersedes Revision: 12/09/2015

	Decomp	osition or	potassium o	xides				
	Byproducts:		sodium oxides					
			Sectio	n 11. Toxicologica	IInforma	ation		
1.1	Informat	tion on		gical effects of this compound			v studied.	
		ogical Effects:					,	
		-	Potassium p	hosphate, Monobasic - Toxic	city Data: Ski	n LD50 (rabbi	t): >4,640 mg/ł	kg;
			Sodium chlo	oride - Toxicity Data: Oral LD	50 (rat): 3,00	0 mg/kg; Oral	LD50 (mouse)	: 4,000
			mg/kg;					
				oride - Irritation Data: Eyes (ra	abbit): 100 m	g (24h) modei	rate; Skin (rabb	oit): 500 mg (24
	Chronic	Taviaglagiagl	mild; Only aslest	Pagiatry of Taylo Effacts of C	homical Sub	otonooo (DTE	CS) data ia pro	contod horo
	Effects:	Toxicological	-	Registry of Toxic Effects of C entry in RTECS for complete		Stances (RTE	CS) data is pre	sented here.
	Lifects.			phosphate, Monobasic RTEC		C6615500		
			-	oride RTECS Number: VZ472				
Carcir	ogenicity	/:	NTP? No	IARC Monographs? No	OSHA Re	egulated? No		
CAS #	ŧ	Hazardous Com	nponents (Ch	emical Name)	NTP	IARC	ACGIH	OSHA
775	8-11-4	Potassium phosp	phate, dibasic		n.a.	n.a.	n.a.	n.a.
7778	8-77-0	Potassium phos	phate, Monoba	asic	n.a.	n.a.	n.a.	n.a.
2662	8-22-8	Sodium azide			n.a.	n.a.	A4	n.a.
764	7-14-5	Sodium chloride			n.a.	n.a.	n.a.	n.a.
1944	91-31-1	EDTA, tetrasodiu	um salt, hydrate		n.a.	n.a.	n.a.	n.a.
9048	8-46-8	Bovine Serum A	Ibumin (BSA)		n.a.	n.a.	n.a.	n.a.
773	2-18-5	Water			n.a.	n.a.	n.a.	n.a.
			Sect	ion 12. Ecological I	Informat	ion		
12.1	Toxicity	:	Avoid releas	se into the environment.				
			Runoff from fire control or dilution water may cause pollution.					
2.2	Persiste		No data ava	ilable.				
	Degrada	-						
2.3		mulative	No data ava	ilable.				
24	Potentia		No doto ovo	ilabla				
2.4	Mobility		No data ava					
2.5	assessn	of PBT and vPvE	NO Gala ava	liladie.				
2.6		lverse effects:	No data ava	ilable.				
			Sectio	on 13. Disposal Co	nsiderati	ions		
			00000	in to: Diopodul ou	nonaonat			
			Secu	on 13. Disposal Col	nsiderat	ions		



Page: 6 of 7

Section 14. Transport Information						
14.1 LAND 1	RANSPORT (US DOT):					
DOT Proper Shipping Name: Not dangerous goods.						
DOT Hazar	d Class:					
UN/NA Number:						
14.1 LAND TRANSPORT (European ADR/RID):						
ADR/RID S	hipping Name: Not dangerous goods.					
UN Numbe						
Hazard Cla						
	ANSPORT (ICAO/IATA):					
	Shipping Name: Not dangerous goods.					
Additional Tra	nsport Transport in accordance with I	ocal, state, and federa	l regulations.			
information:	<b>2</b>					
	Section 15. Regu	llatory Informa	tion			
EPA SARA (Sı	uperfund Amendments and Reauthorization Act	of 1986) Lists				
CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)		
7758-11-4	Potassium phosphate, dibasic	No	No	No		
7778-77-0	Potassium phosphate, Monobasic	No	No	No		
26628-22-8	Sodium azide	Yes 500 LB	Yes 1000 LB	Yes		
7647-14-5	Sodium chloride	No	No	No		
194491-31-1	EDTA, tetrasodium salt, hydrate	No	No	No		
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No		
7732-18-5	Water	No	No	No		
CAS #	Hazardous Components (Chemical Name)	Other US EPA or S	State Lists			
7758-11-4	Potassium phosphate, dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No				
7778-77-0	Potassium phosphate, Monobasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No				
26628-22-8	Sodium azide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No				
7647-14-5	Sodium chloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No				
194491-31-1	EDTA, tetrasodium salt, hydrate	CAA HAP,ODC: N PROP.65: No	o; CWA NPDES: No	; TSCA: No; CA		
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: N Inventory; CA PR	o; CWA NPDES: No OP.65: No	; TSCA: Yes -		
7732-18-5	Water	CAA HAP,ODC: N Inventory; CA PR	o; CWA NPDES: No OP.65: No	; TSCA: Yes -		



Revision: 08/19/2016 persedes Revision: 12/09/2015

CayIndin	Supersedes Revision: 12/09/2015			
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:	08/19/2016			
Additional Information About	No data available.			
This Product:				
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.			



Revision: 08/01/2016

Supersedes Revision: 04/19/2016 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:** 400062 Product Name: Wash Buffer Concentrate (400X) 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: +1 (703)527-3887 Section 2. Hazards Identification 2.1 **Classification of the Substance or Mixture:** Skin Corrosion/Irritation, Category 1B Serious Eye Damage/Eye Irritation, Category 1 2.2 Label Elements: GHS Signal Word: Danger **GHS Hazard Phrases:** H314: Causes severe skin burns and eye damage. H318: Causes serious eye damage. **GHS Precaution Phrases:** P260: Do not breathe {dust/fume/gas/mist/vapors/spray}. P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eye protection/face protection}. **GHS Response Phrases:** P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor/physician. P363: Wash contaminated clothing before reuse. **GHS Storage and Disposal Phrases:** Please refer to Section 7 for Storage and Section 13 for Disposal information.



Page: 2 of 5

Car	nan		Wash Buffe	er Concentrat	te (400X)	Revision: 08/01/2016	
	Adverse Human Health Effects and Symptoms:		Material may be irritating to t May be harmful by inhalatior May cause eye, skin, or resp	Supersedes Revision: 04/19/2016 uses severe skin burns and serious eye damage. aterial may be irritating to the mucous membranes and upper respiratory tract. ay be harmful by inhalation, ingestion, or skin absorption. ay cause eye, skin, or respiratory system irritation. the best of our knowledge, the toxicological properties have not been thoroughly investigated.			
		Sec	tion 3. Composition				
CAS # RTECS		1	oonents (Chemical Name)/	Concentration	EC No./ EC Index No.	GHS Classification	
7758-′ TC5580		Potassium phospha	te, dibasic	53.0 %	231-834-5 NA	No data available.	
7778-7 TC6615		Potassium phospha	te, Monobasic	12.9 %	231-913-4 NA	No data available.	
7732- ZC0110		Water		34.1 %	231-791-2 NA	No data available.	
			Section 4. Fi	rst Aid Meas	sures		
5.1	In Case In Case In Case Suitabl	e of Eye Contact: e of Ingestion: e Extinguishing	Remove to fresh air. If not br personnel. Get immediate me Immediately wash skin with s contaminated clothing. Get m Hold eyelids apart and flush examined and tested by med Wash out mouth with water p unconscious person. Get me medical personnel. Section 5. Fire Use alcohol-resistant foam, Use water spray to cool fire-	edical attention. soap and plenty of w nedical attention if s eyes with plenty of w dical personnel. provided person is c edical attention. Do f <b>Fighting Me</b> carbon dioxide, wat exposed containers	vater for at least 1 symptoms occur. V water for at least 1 conscious. Never g NOT induce vomiti casures er, or dry chemica	5 minutes. Remove Vash clothing before reuse. 5 minutes. Have eyes give anything by mouth to an ing unless directed to do so by	
5.2	Flamm Hazard Flash F Explos	s:	<b>d</b> No data available. No data available. No data. LEL: No data. No data.	UEL: No c	data.		
	-		: As in any fire, wear self-cont equivalent), and full protectiv		-		



	Revision:	08/01/2016
Supersedes	Revision:	04/19/2016

		Section 6. Accidental Release Measures			
6.1	Protective Precautions,	Avoid breathing vapors and provide adequate ventilation.			
	Protective Equipment and	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:				
6.3	Methods and Material For	Contain spill and collect, as appropriate.			
	Containment and Cleaning	Transfer to a chemical waste container for disposal in accordance with local regulations.			
	Up:				
		Section 7. Handling and Storage			
7.1	Precautions To Be Taken	Avoid breathing dust/fume/gas/mist/vapours/spray.			
	in Handling:	Avoid prolonged or repeated exposure.			
7.2	Precautions To Be Taken	Keep container tightly closed.			
	in Storing: Store in accordance with information listed on the product insert.				
	Secti	on 8. Exposure Controls/Personal Protection			
8.1	Exposure Parameters:				
8.2	Exposure Controls:				
8.2.1	Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne			
	(Ventilation etc.):	levels below recommended exposure limits.			
8.2.2	Personal protection equip	ment:			
	Eye Protection:	Safety glasses			
	Protective Gloves:	Compatible chemical-resistant gloves			
	Other Protective Clothing:	Lab coat			
	Respiratory Equipment	NIOSH approved respirator, as conditions warrant.			
	(Specify Type):				
	Work/Hygienic/Maintenan	Do not take internally.			
	ce Practices:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety			
	:	shower.			
		Wash thoroughly after handling.			
		No data available.			
	Se	ction 9. Physical and Chemical Properties			
9.1	-	cal and Chemical Properties			
	Physical States:	[]Gas [X]Liquid []Solid			
	Appearance and Odor:	A clear, colorless solution			
	pH:	7.4			
	Melting Point:	No data.			
	Boiling Point:	No data.			
	Flash Pt:	No data.			
	Evaporation Rate:	No data.			
	Flammability (solid, gas):	No data available.			
	Explosive Limits:	LEL: No data. UEL: No data.			
	Vapor Pressure (vs. Air or	mm No data.			
	Hg):				
	Vapor Density (vs. Air = 1):	No data.			
		Multi-region forma			



	CHEMICAL						0	uperseues itevis	SION: 04/19/2016
	Specific Gr	avity (Water =	1):	No data.					
	Solubility in	n Water:		No data.					
	Octanol/Wa	ater Partition		No data.					
	Coefficient	:							
	Autoignitio	n Pt:		No data.					
	Decompos	ition Temperat	ure:	No data.					
	Viscosity:			No data.					
9.2	Other Inform	nation							
	Percent Vo	latile:		No data.					
			S	ection 1	0. Stability and	React	ivity		
10.1	Reactivity:		No dat	a available.	•				
10.2	Stability:		Unstab	ole[] S	Stable [ X ]				
10.3	Stability No	ote(s):	Stable	if stored in a	accordance with inform	ation listed	on the product	insert.	
	Polymeriza				Will not occur [ X ]		·		
10.4	Conditions			a available.					
10.5	• • • • • • • • • • • • • • • • • • • •	ility - Materials			onte				
	To Avoid:	mity - Materials	strong	UNIUIZIIIY ay	ento				
10.6	Hazardous		nhoent	norus oxides					
10.0	Decompos	ition or		ium oxides	•				
	-		potassi						
	Byproducts	5.							
			Se	ction 11	. Toxicological	Inform	ation		
11.1	Information	n on	The to	kicological e	ffects of this product ha	ive not bee	en thoroughly st	udied.	
	Toxicologi	cal Effects:	Potassium phosphate, Monobasic - Toxicity Data: Oral LDLO (rat): 4640 mg/kg;						
	Chronic To	xicological	Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.						
	Effects:		See actual entry in RTECS for complete information.						
			Potass	ium phosph	ate, Monobasic RTECS	S Number:	TC6615500		
Carciı	nogenicity:		NTP? No IARC Monographs? No OSHA Regulated? No						
CAS	# H	azardous Com	ponents	s (Chemical	l Name)	NTP	IARC	ACGIH	OSHA
775	58-11-4 P	otassium phosp	hate, dil	basic		n.a.	n.a.	n.a.	n.a.
777	/8-77-0 P	otassium phosp	hate, M	onobasic		n.a.	n.a.	n.a.	n.a.
773	32-18-5 W	/ater				n.a.	n.a.	n.a.	n.a.
	ł		S	ection 1	2. Ecological I	nforma <sup>.</sup>	tion	•	
12.1	Toxicity:				the environment.				
					ntrol or dilution water m	av cause r	pollution.		
12.2	Persistence	e and		a available.		,			
12.2	Degradabil		NO GUI	a available.					
40.0	-	-	No dat	e evellekte					
12.3	Bioaccumu	liative	NO data	a available.					
	Potential:								
12.4	Mobility in			a available.					
12.5	Results of	PBT and vPvB	No dat	a available.					
	assessmer	it:							
12.6	Other adve	rse effects:	No dat	a available.					



Page: 5 of 5

Multi-region format

Revision: 08/01/2016 Supersedes Revision: 04/19/2016

				Supe	ersedes Revision: 04/19/2016	
		Section 13. Dispos	al Considera	ations		
13.1 Waste D	visposal Method:	Dispose in accordance with loca	al, state, and federal	regulations.		
		Section 14. Tran	sport Informa	ation		
14.1 LAND T	RANSPORT (US	DOT):	•			
DOT Prope	er Shipping Name	Not dangerous goods.				
DOT Hazar	d Class:					
UN/NA Nur	nber:					
14.1 LAND T	RANSPORT (Eur	opean ADR/RID):				
	hipping Name:	Not dangerous goods.				
UN Numbe Hazard Cla						
	ANSPORT (ICAO/	IATA):				
	Shipping Name:	Not dangerous goods.				
Additional Trai	nsport	Transport in accordance with lo	cal, state, and feder	al regulations.		
Information:						
		Section 15. Regul	atory Informa	ation		
EPA SARA (Su	perfund Amendn	nents and Reauthorization Act	of 1986) Lists			
CAS #	Hazardous Com	ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
7758-11-4	Potassium phosp	hate, dibasic	No	No	No	
7778-77-0	Potassium phosp	hate, Monobasic	No	No	No	
7732-18-5	Water		No	No	No	
CAS #	Hazardous Com	ponents (Chemical Name)	Other US EPA or State Lists			
7758-11-4	Potassium phosp	hate, dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No			
7778-77-0	Potassium phosp	hate, Monobasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No			
7732-18-5	Water		CAA HAP,ODC: Inventory; CA PI	No; CWA NPDES ROP.65: No	No; TSCA: Yes -	
Regulatory Info Statement:	rmation	This SDS was prepared in acco No.1272/2008.	rdance with 29 CFR	8 1910.1200 and R	egulation (EC)	
		Section 16. Oth	ner Informatio	on		
Revision Date:		08/01/2016				
Revision Date: Additional Info	rmation About	08/01/2016 No data available.				
	rmation About					



Revision: 08/01/2016 Supersedes Revision: 01/22/2015

		acc	cording to Regulation (EC) No. 190	7/2006 as amended b	y (EC) No. 1272/200	08
		Section 1.	Identification of the Substar	nce/Mixture and of	the Company/U	ndertaking
1.1	Product Product		400074 TMB Substrate Solution			
1.2	Relevan	t identified uses o	of the substance or mixture a	and uses advised a	gainst:	
	Releva	ant identified uses	: For research use only, no	ot for human or vete	rinary use.	
1.3	Details	of the Supplier of	the Safety Data Sheet:			
	Comp	any Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	bany		
	Web s	ite address:	www.caymanchem.com			
	Inform	ation:	Cayman Chemical Comp	bany	+1 (73	4)971-3335
1.4	-	ncy telephone nu jency Contact:	mber: CHEMTREC Within USA CHEMTREC Outside US			)0)424-9300 )3)527-3887
			Section 2. Ha	zards Identifi	cation	
2.1 2.2 2.3	Label El GHS S GHS H Based GHS F No ph GHS S Please Advers	Precaution Phrase rases apply. Response Phrases rases apply. Storage and Dispo e refer to Section 7 e Human Health and Symptoms:	None urrently available data this sub- es: s: s: for Storage and Section 13 for Material may be irritating to t May be harmful by inhalation May cause eye, skin, or resp Overexposure may cause rep To the best of our knowledge	Disposal informatic he mucous membra , ingestion, or skin a iratory system irritat productive disorders a, the toxicological p	on. Ines and upper res absorption. ion. s based on tests w roperties have no	spiratory tract. vith laboratory animals. t been thoroughly investigated.
		Seci	tion 3. Composition	/Information	on Ingredie	nts
CAS RTE	;#/ CS#	Hazardous Comp REACH Registra	oonents (Chemical Name)/ tion No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA		TMB Substrate Solu	tion	100.0 %	NA NA	No data available.



Revision: 08/01/2016 Supersedes Revision: 01/22/2015

		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:	A solid water stream may be inefficient.
5.2	Flammable Properties an Hazards:	<b>d</b> No data available.
		No data available.
	Flash Pt:	170.00 F (76.7 C) Method Used: Closed Cup
	Explosive Limits:	LEL: No data. UEL: No data.
	Autoignition Pt:	No data.
5.3	Fire Fighting Instructions	: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
		Section 6. Accidental Release Measures
6.1	Protective Precautions,	Avoid breathing vapors and provide adequate ventilation.
	Protective Equipment and	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 Precautions:	Take steps to avoid release into the environment, if safe to do so.
6.3	Methods and Material Fo	r Contain spill and collect, as appropriate.
		ng Transfer to a chemical waste container for disposal in accordance with local regulations.
	Up:	
		Section 7. Handling and Storage
7.1	Precautions To Be Taken	Avoid breathing dust/fume/gas/mist/vapours/spray.
	in Handling:	Avoid prolonged or repeated exposure.
7.2	Precautions To Be Taken	Keep 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:	



	HEMICAL	Supersedes Revision: 01/22/2015
8.2	Exposure Controls:	
8.2.1		Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne
	(Ventilation etc.):	levels below recommended exposure limits.
8.2.2	Personal protection equip	ment:
	Eye Protection:	Safety glasses
	Protective Gloves:	Compatible chemical-resistant gloves
	<b>Other Protective Clothing:</b>	Lab coat
	Respiratory Equipment	NIOSH approved respirator, as conditions warrant.
	(Specify Type):	
	Work/Hygienic/Maintenan	Do not take internally.
	ce Practices:	Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
		Wash thoroughly after handling.
		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
	pH:	5.9
	Melting Point:	No data.
	Boiling Point:	No data.
	Flash Pt:	170.00 F (76.7 C) Method Used: Closed Cup
	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	I): No data.
	Solubility in Water:	No data.
	Octanol/Water Partition	No data.
	Coefficient:	
	Autoignition Pt:	No data.
	Decomposition Temperatu	
	Viscosity:	No data.
9.2	Other Information	
<i></i>	Percent Volatile:	No data.
		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:	No data available.
10.5	Incompatibility - Materials	strong oxidizing agents
	To Avoid:	
10.5		carbon dioxide
	Hazardous	carbon dioxide carbon monoxide



	Revision:	08/01/2016
Supersedes	Revision:	01/22/2015

	Decomp	osition or	nitrogen oxides					
	Byprodu	ucts:						
			Section 11. Toxico	ological	Informat	ion		
11.1	Informa	tion on	The toxicological effects of this	product hav	ve not been t	horoughly stu	ıdied.	
	Toxicolo	ogical Effects:						
Carci	nogenicit	y:	NTP? No IARC Monograp	hs? No	OSHA Reg	ulated? No		
CAS	#	Hazardous Com	ponents (Chemical Name)		NTP	IARC	ACGIH	OSHA
	NA	TMB Substrate S	olution		n.a.	n.a.	n.a.	n.a.
			Section 12. Ecolo	ogical In	formatio	on		
12.1	Toxicity	:	Avoid release into the environm	nent.				
			Runoff from fire control or diluti	on water ma	ay cause pol	ution.		
12.2	Persiste	ence and	No data available.					
	Degrada	ability:						
12.3		imulative	No data available.					
	Potentia		No. data available					
12.4	Mobility		No data available.					
12.5	assess		No data available.					
12.6		dverse effects:	No data available.					
					aidoratic			
13.1	Wasto F	Nisposal Mothod:	Section 13. Dispose Dispose in accordance with loc					
	Waste L	oisposal Method:			-			
			Section 14. Tran	isport in	formatio	on		
14.1		RANSPORT (US I	-					
		er Shipping Name:	Not dangerous goods.					
_	OT Hazar							
14.1		RANSPORT (Euro hipping Name:	Not dangerous goods.					
	N Numbe		Not dangerous goods.					
н	azard Cla	ISS:						
14.3	AIR TR	ANSPORT (ICAO/I	ATA):					
IC		Shipping Name:	Not dangerous goods.					
Addi	tional Tra	nsport	Transport in accordance with lo	ocal, state, a	and federal r	egulations.		
Infor	mation:							
			Section 15. Regu	latory Ir	offormation	on		
EPA	SARA (Sı	perfund Amendm	ents and Reauthorization Act	of 1986) Li	sts			
CAS	#	Hazardous Com	ponents (Chemical Name)	S. 302 (I	EHS)	S. 304 RQ	S. 313	3 (TRI)
	NA	TMB Substrate S	olution	No		No	No	
CAS	#	Hazardous Com	ponents (Chemical Name)	Other US	EPA or Sta	ate Lists	ł	
	NA	TMB Substrate S	olution	CAA HA PROP.6		CWA NPDE	S: No; TSCA:	No; CA
		•		+				
							N	Iulti-region format
							IN IN	and region format



Revision: 08/01/2016 Supersedes Revision: 01/22/2015

Regulatory Information Statement:	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.
	Section 16. Other Information
Revision Date:	08/01/2016
This Product:	
Additional Information About This Product: Company Policy or Disclaimer:	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.



Revision: 10/31/2016

/	CHEMICAL		Supersedes Revision: 11/10/2015				
	acc	cording to Regulation (EC) No. 1907/2006 as amended by (	EC) No. 1272/2008				
	Section 1.	Identification of the Substance/Mixture and of th	e Company/Undertaking				
1.1	Product Code: Product Name:	401341 Anti-MPO (human) HRP Conjugate					
1.2	Relevant identified uses of	of the substance or mixture and uses advised aga	ainst:				
	Relevant identified uses	•					
1.3	Details of the Supplier of	-	,				
1.5	Details of the Supplier of	the Galety Data Gleet.					
	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 nu	nber:					
	Emergency Contact:	CHEMTREC Within USA and Canada:	+1 (800)424-9300				
		CHEMTREC Outside USA and Canada:	+1 (703)527-3887				
		Section 2. Hazards Identifica	ation				
2.1	Classification of the Subs						
	Respiratory Sensitization						
2.2	Label Elements:						
	GHS Signal Word:	Danger					
	GHS Hazard Phrases:	24					
	H334: May cause allergy	or asthma symptoms or breathing difficulties if inhale	ed.				
	GHS Precaution Phrase						
		ust/fume/gas/mist/vapors/spray}.					
		ate ventilation wear respiratory protection.					
	GHS Response Phrases	S:					
	P304+340: IF INHALED:	Remove victim to fresh air and keep at rest in a positi	tion comfortable for breathing.				
	P342+311: If experiencing respiratory symptoms call a POISON CENTER or doctor/physician.						
	GHS Storage and Dispo	sal Phrases:					
	Please refer to Section 7	for Storage and Section 13 for Disposal information.					
2.3	Adverse Human Health	Material may be irritating to the mucous membrane	es and upper respiratory tract.				
	Effects and Symptoms:	May be harmful by inhalation, ingestion, or skin abs	sorption.				
		May cause allergy or asthma symptoms or breathin	ng difficulties if inhaled.				
		May cause eye, skin, or respiratory system irritation	n.				
		To the best of our knowledge, the toxicological prop	perties have not been thoroughly investigated.				



Multi-region format

Revision: 10/31/2016 Supersedes Revision: 11/10/2015

			ian 0. 0 't'	//		-1-		
		Sect	tion 3. Composition	/Information	on Ingredie	nts		
CAS RTEC		Hazardous Components (Chemical Name)/ REACH Registration No.		Concentration	EC No./ EC Index No.	GHS Classification		
NA NA		Mouse Anti-MPO HF	RP Conjugate	0.1 -5.0 %	NA NA	Resp. Sens. 1: H334		
NA NA	,		njugate stabilizer	95.0 -99.9 %	NA NA	No data available.		
			Section 4. Fi	rst Aid Meas	ures			
4.1	Descrip Measur	otion of First Aid es:						
	In Case	of Inhalation:	Remove to fresh air. If not bre Get immediate medical attent		al respiration or giv	ve oxygen by trained personnel.		
	In Case	of Skin Contact:	Immediately wash skin with s clothing. Get medical attentio			i minutes. Remove contaminated efore reuse.		
	In Case	of Eye Contact:	Hold eyelids apart and flush e and tested by medical persor		vater for at least 1	5 minutes. Have eyes examined		
	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 Me	asures			
5.1	Suitable	e Extinguishing	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.					
	Media:		Use water spray to cool fire-exposed containers.					
	Unsuita Media:	ble Extinguishing	A solid water stream may be	inefficient.				
5.2		-	dNo data available.					
	Hazards	5:	<b></b>					
	<b></b>		No data available.					
	Flash P		No data.					
	-	ve Limits:	LEL: No data.	UEL: No d	ata.			
<b>-</b> -	-	nition Pt:	No data.					
5.3	Fire Fig		s: As in any fire, wear self-conta equivalent), and full protectiv		-			
			Section 6. Accider	ntal Release	Measures			
6.1	Protecti	ive Precautions, ive Equipment and ency Procedures:	Avoid raising and breathing d As conditions warrant, wear and appropriate personal pro	a NIOSH approved	self-contained bre	eathing apparatus, or respirator,		
6.2	Environ Precaut		Take steps to avoid release	into the environmer	nt, if safe to do so.			
6.3	Method	s and Material For	r Contain spill and collect, as	appropriate.				
	Contain	ment and Cleanin	ngTransfer to a chemical waste	e container for dispo	sal in accordance	with local regulations.		
	Up:							



Revision: 10/31/2016

		Section 7. Handling and Storage						
7.1	Precautions To Be Taken A	Avoid breathing dust/fume/gas/mist/vapours/spray.						
		Avoid prolonged or repeated exposure.						
7.2	Precautions To Be Taken							
		Store in accordance with information listed on the product insert.						
	U							
	Section	on 8. Exposure Controls/Personal Protection						
3.1	Exposure Parameters:							
8.2	Exposure Controls:							
8.2.1	Engineering Controls	Jse process enclosures, local exhaust ventilation, or other engineering controls to control airborn						
	(Ventilation etc.):	evels below recommended exposure limits.						
8.2.2	Personal protection equipn	nent:						
	Eye Protection:	Safety glasses						
	Protective Gloves:	Compatible chemical-resistant gloves						
	Other Protective Clothing:L	.ab coat						
	Respiratory Equipment	NOSH approved respirator, as conditions warrant.						
	(Specify Type):							
	Work/Hygienic/Maintenan	Do not take internally.						
		Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.						
	V	Vash thoroughly after handling.						
	Ν	No data available.						
	Sei	ction 9. Physical and Chemical Properties						
<b>9</b> .1	Information on Basic Physic							
	Physical States:	[]Gas [X]Liquid []Solid						
	Appearance and Odor:	solution						
	pH:	No data.						
	Melting Point:	No data.						
	Boiling Point:	No data.						
	Flash Pt:	No data.						
	Evaporation Rate:	No data.						
	Flammability (solid, gas):	No data available.						
	Explosive Limits:	LEL: No data. UEL: No data.						
	Vapor Pressure (vs. Air or r	nm No data.						
	Hg):							
	Vapor Density (vs. Air = 1):	No data.						
	Specific Gravity (Water = 1)							
	Solubility in Water:	No data.						
	Octanol/Water Partition	No data.						
	Coefficient:							



	man				SI	Revisi upersedes Revisi	on: 10/31/2016 on: 11/10/2015
	Autoignit	ion Pt:	No data.			<u> </u>	
	Decompo	sition Temperati	ure: No data.				
	Viscosity	:	No data.				
9.2	Other Info	rmation					
	Percent V	olatile:	No data.				
			Section 10. Stability and	d Reactiv	/ity		
10.1	Reactivity	/:	No data available.		-		
10.2	Stability:		Unstable [ ] Stable [ X ]				
10.3	Stability N	Note(s):	Stable if stored in accordance with inform	nation listed o	n the product	insert.	
	Polymeriz	zation:	Will occur [ ] Will not occur [ X ]				
10.4	Condition	ns To Avoid:	No data available.				
10.5	Incompat	ibility - Materials	No data available.				
	To Avoid:	:					
10.6	Hazardou	S	No data available.				
I	Decompo	sition or					
	Byproduc	sts:					
			Section 11. Toxicologica	l Informa	tion		
11.1	Informatio	on on	The toxicological effects of this product h	ave not been	thoroughly st	udied.	
	Toxicolog	gical Effects:					
	#						
CAS	#	Hazardous Com	ponents (Chemical Name)	NTP	IARC	ACGIH	OSHA
CAS			ponents (Chemical Name) HRP Conjugate	NTP n.a.	n.a.	ACGIH n.a.	n.a.
CAS	NA	Mouse Anti-MPO					
	NA	Mouse Anti-MPO	HRP Conjugate	n.a. n.a.	n.a. n.a.	n.a.	n.a.
	NA NA	Mouse Anti-MPO	HRP Conjugate	n.a. n.a.	n.a. n.a.	n.a.	n.a.
	NA	Mouse Anti-MPO	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment.	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1	NA NA	Mouse Anti-MPO StabilZyme HRP	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1	NA NA Toxicity: Persisten	Mouse Anti-MPO StabilZyme HRP	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment.	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1	NA NA Toxicity: Persisten Degradab	Mouse Anti-MPO StabilZyme HRP ce and bility:	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r No data available.	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1	NA NA Toxicity: Persisten Degradab Bioaccum	Mouse Anti-MPO StabilZyme HRP ce and pility: nulative	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1 12.2 12.3	NA NA Toxicity: Persisten Degradab Bioaccum Potential:	Mouse Anti-MPO StabilZyme HRP ce and pility: nulative	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r No data available. No data available.	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1 12.2 12.3 12.4	NA NA Toxicity: Persisten Degradab Bioaccum Potential: Mobility in	Mouse Anti-MPO StabilZyme HRP of ce and pility: nulative	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r No data available. No data available.	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1 12.2 12.3 12.4	NA NA Toxicity: Persisten Degradab Bioaccum Potential: Mobility in Results o	Mouse Anti-MPO StabilZyme HRP ce and illity: nulative n Soil: f PBT and vPvB	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r No data available. No data available.	n.a. n.a.	n.a. n.a.	n.a.	n.a.
CAS 12.1 12.2 12.3 12.4 12.5 12.6	NA NA Toxicity: Persisten Degradab Bioaccum Potential: Mobility in Results o assessme	Mouse Anti-MPO StabilZyme HRP ce and illity: nulative n Soil: f PBT and vPvB	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r No data available. No data available.	n.a. n.a.	n.a. n.a.	n.a.	n.a.
12.1 12.2 12.3 12.4 12.5	NA NA Toxicity: Persisten Degradab Bioaccum Potential: Mobility in Results o assessme	Mouse Anti-MPO StabilZyme HRP of ce and pility: nulative n Soil: f PBT and vPvB ent:	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r No data available. No data available. No data available. No data available. No data available.	n.a. n.a.	n.a. n.a. ON	n.a.	n.a.
12.1 12.2 12.3 12.4 12.5	NA NA Toxicity: Persisten Degradab Bioaccum Potential: Mobility in Results o assessme Other adv	Mouse Anti-MPO StabilZyme HRP of ce and pility: nulative f PBT and vPvB ent: verse effects:	HRP Conjugate conjugate stabilizer Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution water r No data available. No data available. No data available. No data available.	n.a. n.a.	n.a. n.a. ON ollution.	n.a.	n.a.



# SAFETY DATA SHEET Anti-MPO (human) HRP Conjugate

Revision: 10/31/2016 Supersedes Revision: 11/10/2015

CHEMICAL				Superse	des Revision: 11/10/2015	
		Section 14. Tran	sport Informa	ation		
14.1 LAND T	RANSPORT (US	DOT):				
DOT Prope DOT Hazar UN/NA Nun		: Not dangerous goods.				
14.1 LAND T	RANSPORT (Eur	opean ADR/RID):				
ADR/RID S	hipping Name:	Not dangerous goods.				
UN Numbe	r:					
Hazard Cla	SS:					
	ANSPORT (ICAO/	-				
	Shipping Name:	Not dangerous goods.				
Additional Trai	nsport	Transport in accordance with lo	ocal, state, and feder	al regulations.		
Information:						
		Section 15. Regul	•	ation		
· · · ·	1	nents and Reauthorization Act	-			
CAS #	Hazardous Com Mouse Anti-MPO	ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
NA NA		conjugate stabilizer	No	No	No	
CAS #		ponents (Chemical Name)	Other US EPA or			
NA	Mouse Anti-MPO		PROP.65: No	No; CWA NPDES: No		
NA	StabilZyme HRP	conjugate stabilizer	CAA HAP,ODC: PROP.65: No	No; CWA NPDES: No	o; TSCA: No; CA	
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	on		
Revision Date:		10/31/2016				
Additional Info	rmation About	No data available.				
This Product:						
Company Polic	y 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.				



**Product Code:** 

Product Name:

**Company Name:** 

Web site address:

**Emergency Contact:** 

Information:

Label Elements:

**GHS Signal Word:** 

**GHS Hazard Phrases:** 

**GHS Precaution Phrases:** 

GHS Response Phrases:

**Relevant identified uses:** 

1.1

1.2

1.3

1.4

2.1

2.2

SAFETY DATA SHEET **MPO** (human) Elisa Standard Revision: 10/31/2016 Supersedes Revision: 11/10/2015 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 401344 MPO (human) Elisa Standard Relevant identified uses of the substance or mixture and uses advised against: For research use only, not for human or veterinary use. Details of the Supplier of 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 Emergency telephone number: CHEMTREC Within USA and Canada: +1 (800)424-9300 CHEMTREC Outside USA and Canada: +1 (703)527-3887 Section 2. Hazards Identification **Classification of the Substance or Mixture:** Serious Eye Damage/Eye Irritation, Category 2A Warning H319: Causes serious eye irritation. P264: Wash {hands} thoroughly after handling. P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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.

#### 2.3 Adverse Human Health Causes serious eye 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 skin or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.



#### **SAFETY DATA SHEET** MPO (human) Elisa Standard

Revision: 10/31/2016 Supersedes Revision: 11/10/2015

	Section 3. Composition/Information on Ingredients						
CAS # RTEC		Hazardous Comp REACH Registra	oonents (Chemical Name)/ tion No.	Concentration	EC No./ EC Index No.	GHS Classification	
NA NA		Myeloperoxidase		< 0.01 %	NA NA	No data available.	
9048 MT644		Bovine Serum Albun	nin (BSA)	1.0 %	232-936-2 NA	Acute Tox.(O) 4: H302	
NA NA		EIA Buffer		>98.99 %	NA NA	Eye Damage 2A: H319	
	Section 4. First Aid Measures						
4.1	Descrip	tion of First Aid					
	Measur	es:					
	In Case	of Inhalation:	Remove to fresh air. If not bre Get immediate medical attent		respiration or giv	e oxygen by trained personnel.	
	In Case	of Skin Contact:	Immediately wash skin with se clothing. Get medical attention			minutes. Remove contaminated efore reuse.	
	In Case	of Eye Contact:	Hold eyelids apart and flush e and tested by medical person		ater for at least 15	5 minutes. Have eyes examined	
	In Case	of Ingestion:	Wash out mouth with water p		nscious. Never gi	ve anything by mouth to an	
			unconscious person. Get med	dical attention. Do NO	OT induce vomitir	ng unless directed to do so by	
			medical personnel.				
			Section 5. Fire	Fighting Mea	asures		
5.1		e Extinguishing	Use alcohol-resistant foam, c		, or dry chemical	spray.	
	Media:		Use water spray to cool fire-e	exposed containers.			
		ble Extinguishing	A solid water stream may be	inefficient.			
5.0	Media:	h la Deservation au	-Nie dete en Sieble				
5.2	Hazard	-	<b>d</b> No data available.				
	nazaru.		No data available.				
	Flash P	t:	No data.				
		ve Limits:	LEL: No data.	UEL: No da	ta.		
	-	nition Pt:	No data.	0 00			
5.3	-		:As in any fire, wear self-conta	ained breathing appa	ratus pressure-de	emand (NIOSH approved or	
		0	equivalent), and full protective		-		
			Section 6. Acciden	tal Release N	leasures		
6.1	Protect	ive Precautions,				1.	
0.1	<ol> <li>Protective Precautions, Avoid raising and breathing dust, and provide adequate ventilation.</li> <li>Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator</li> </ol>						
	<b>Emergency Procedures:</b> and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).						
6.2	<b>Environmental</b> Take steps to avoid release into the environment, if safe to do so.						
	Precaut	ions:					
6.3			r Contain spill and collect, as a				
	Contair	ment and Cleanir	gTransfer to a chemical waste	e container for dispos	al in accordance	with local regulations.	
	Up:						
						Multi-region format	



7.1

7.2

#### SAFETY DATA SHEET MPO (hun

man	MPO (human) Elisa Standard	Revision: 10/31/2016 Supersedes Revision: 11/10/2015
	Section 7. Handling and Storage	
Precautions To Be Taken	Avoid breathing dust/fume/gas/mist/vapours/spray.	
in Handling:	Avoid prolonged or repeated exposure.	
Precautions To Be Taken	Keep container tightly closed.	
in Storing:	Store in accordance with information listed on the product inset	rt.

#### Section 8. Exposure Controls/Personal Protection

#### **Exposure Parameters:** 8.1

#### 8.2 **Exposure Controls:**

8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. (Ventilation etc.):

#### 8.2.2 Personal protection equipment:

Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing	g:Lab coat
<b>Respiratory Equipment</b>	NIOSH approved respirator, as conditions warrant.
(Specify Type):	
Work/Hygienic/Maintena	n Do not take internally.
ce Practices:	Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.
	No data available.

#### Section 9. Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties **Physical States:** []Gas [] Liquid [X] Solid lyophilized solid Appearance and Odor: No data. pH: **Melting Point:** No data. **Boiling Point:** No data. Flash Pt: No data. No data. **Evaporation Rate:** No data available. Flammability (solid, gas): LEL: No data. UEL: No data. **Explosive Limits:** 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. **Octanol/Water Partition** No data. **Coefficient:**



# **SAFETY DATA SHEET** MPO (human) Elisa Standard

	Revision:	10/31/2016
Supersedes	Revision:	11/10/2015

	Autoign	ition Pt:	No data.					
	Decomposition Temperature: No data.							
	Viscosit	у:	No data.					
9.2	2 Other Information							
	Percent Volatile: No data.							
			Section 1	0. Stability and	Reactiv	/ity		
10.1	Reactivi	ty:	No data available.					
10.2	Stability	:	Unstable [ ]	Stable [ X ]				
10.3	Stability	Note(s):	Stable if stored in	accordance with informa	tion listed o	n the product	insert.	
	Polymer	ization:	Will occur [ ]	Will not occur [ X ]				
10.4	Conditio	ons To Avoid:	No data available.					
10.5	Incompa	atibility - Materials	<b>s</b> No data available.					
	To Avoid	d:						
10.6	Hazardo		No data available.					
	-	osition or						
	Byprodu	icts:						
			Section 11	1. Toxicological	Informa	ition		
11.1	Informat	tion on	The toxicological e	effects of this product ha	ve not been	thoroughly st	udied.	
	Toxicolo	ogical Effects:						
CAS	#	Hazardous Com	ponents (Chemica	Il Name)	NTP	IARC	ACGIH	OSHA
	NA	Myeloperoxidase			n.a.	n.a.	n.a.	n.a.
904	8-46-8	Bovine Serum Al	bumin (BSA)		n.a.	n.a.	n.a.	n.a.
	NA	EIA Buffer			n.a.	n.a.	n.a.	n.a.
		•	Section '	12. Ecological Ir	formati	on	•	•
12.1	Toxicity	:	Avoid release into	¥				
	-		Runoff from fire cc	ontrol or dilution water ma	ay cause po	ollution.		
12.2	Persiste	nce and	No data available.					
	Degrada	bility:						
12.3	Bioaccu	mulative	No data available.					
	Potentia	1:						
12.4	Mobility	in Soil:	No data available.					
12.5	Results	of PBT and vPvB	No data available.					
	assessn	nent:						
12.6	Other ac	lverse effects:	No data available.					
			Section 13	3. Disposal Con	siderati	ons		
13.1	Waste D	isposal Method:	Dispose in accorda	ance with local, state, ar	d federal re	gulations.		



#### **SAFETY DATA SHEET** MPO (human) Elisa Standard

Revision: 10/31/2016 Supersedes Revision: 11/10/2015

#### Supersedes Revision: 11/10/2015 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) NA Myeloperoxidase No No No 9048-46-8 Bovine Serum Albumin (BSA) No No No NA EIA Buffer No No No CAS # Hazardous Components (Chemical Name) Other US EPA or State Lists CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA NA Myeloperoxidase PROP.65: No CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -9048-46-8 Bovine Serum Albumin (BSA) Inventory; CA PROP.65: No CAA HAP, ODC: No; CWA NPDES: No; TSCA: No; CA NA EIA Buffer PROP.65: No **Regulatory Information** This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008. Statement: Section 16. Other Information **Revision Date:** 10/31/2016 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.



Revision: 06/21/2016

	according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008					
		Section 1. Ide	entification of the Substan	ce/Mixture and of t	he Company/Ur	ndertaking
1.1	Product Product		401412 Anti-MPO (human) ELISA	A Strip Plate		
1.2	Relevan	t identified uses of th	ne substance or mixture a	nd uses advised ag	jainst:	
	Releva	ant identified uses:	For research use only, no	ot for human or veteri	inary use.	
1.3	Details o	of the Supplier of the	Safety Data Sheet:			
	Compa	any Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	any		
	Web s	ite address:	www.caymanchem.com			
	Inform	ation:	Cayman Chemical Comp	any	+1 (734	4)971-3335
1.4	-	ncy telephone numbe	er:			
	Emerg	ency Contact:	CHEMTREC Within USA		-	0)424-9300
			CHEMTREC Outside US	A and Canada:	+1 (703	3)527-3887
			Section 2. Haz	zards Identific	ation	
2.1		cation of the Substan	ice or Mixture:			
2.2	Label El	ements:				
	GHS F Based GHS F No phi GHS F No phi	Precaution Phrases: rases apply. Response Phrases: rases apply.	None ently available data this subs	stance or mixture is n	not classifiable ac	cording to GHS.
		Storage and Disposal	Storage and Section 13 for	Disposal information		
2.3	Adverse	e Human Health M and Symptoms: M M	laterial may be irritating to the average of the lay be harmful by inhalation lay cause eye, skin, or resp	ne mucous membran , ingestion, or skin ab iratory system irritatio	es and upper res psorption. pn.	piratory tract. been thoroughly investigated.
		Sectio	n 3. Composition	/Information c	on Ingredier	nts
CAS RTE	#/ CS #	Hazardous Compon REACH Registratior	ents (Chemical Name)/ n No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA		Anti-MPO (human) ELIS	SA Strip Plate	100.0 %	NA NA	No data available.



Revision: 06/21/2016

		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 ar Hazards:	I <b>d</b> No 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	<b>s:</b> As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
		Section 6. Accidental Release Measures
6.1	Protective Precautions,	Avoid raising and breathing dust, and provide adequate ventilation.
	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 Precautions:	Take steps to avoid release into the environment, if safe to do so.
6.3	Methods and Material Fo	r Contain spill and collect, as appropriate.
	Containment and Cleanin	hgTransfer 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	NKeep 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:	



Revision: 06/21/2016

8.2	Exposure Controls:	
8.2.1	-	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne
0.2.1		evels below recommended exposure limits.
0 7 7		
8.2.2	Personal protection equip	
	-	Safety glasses
		Compatible chemical-resistant gloves
	Other Protective Clothing:	
		NIOSH approved respirator, as conditions warrant.
	(Specify Type):	
	Work/Hygienic/Maintenan	Do not take internally.
		Facilities storing or utilizing this material should be equipped with an eyewash and a safety showe
		Wash thoroughly after handling.
		No data available.
	Se	ction 9. Physical and Chemical Properties
9.1	Information on Basic Physi	cal and Chemical Properties
	Physical States:	[]Gas []Liquid [X]Solid
	Appearance and Odor:	Plate
	pH:	No data.
	Melting Point:	No data.
	Boiling Point:	No data.
	Flash Pt:	No data.
	Evaporation Rate:	No data.
	Flammability (solid, gas):	No data available.
	Explosive Limits:	LEL: No data. UEL: No data.
	Vapor Pressure (vs. Air or	mm No data.
	Hg):	
	Vapor Density (vs. Air = 1):	No data.
	Specific Gravity (Water = 1	): No data.
	Solubility in Water:	No data.
	Octanol/Water Partition	No data.
	Coefficient:	
	Autoignition Pt:	No data.
	Decomposition Temperatu	
	Viscosity:	No data.
9.2	Other Information	
<b>J.</b> Z	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	-	No data available.
10.4		
10.5	Incompatibility - Materials	NO GATA AVAIIADIE.
	To Avoid:	
10.6	Hazardous	No data available.
		Multi-region form



Revision: 06/21/2016

Toxicological Effects:         CAS #       Hazardous Components (Chemical Name)       NTP       IARC       ACGIH         NA       Anti-MPO (human) ELISA Strip Plate       n.a.       N.S.       No.S.       No.S.       No.S.       No.S.       No.S.       No.S.       No.S.       No.S.       No.S.       <		Decomp	position or					
11.1       Information on Toxicological Effects:       The toxicological effects of this product have not been thoroughly studied.         CAS #       Hazardous Components (Chemical Name)       NTP       IARC       ACGIH         NA       Anti-MPO (human) ELISA Strip Plate       n.a.       N.G       Section 12. Ecological Information       Section 12.       Section 13. Uses or auses on auses or auses on auses or		Byprod	ucts:					
Toxicological Effects:         CAS #       Hazardous Components (Chemical Name)       NTP       IARC       ACGIH         NA       Anti-MPO (human) ELISA Strip Plate       n.a.       n.a.       n.a.       n.a.         Section 12. Ecological Information         12.1 Toxicity:       Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.         12.2 Persistence and No data available. Degradability:         Bioaccumulative No data available. Potential:         12.3 Bioaccumulative No data available.         Potential:         12.4 Mobility in Soil: No data available.         Section 13. Disposal Considerations         13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         Section 14. Transport Information         14.1 LAND TRANSPORT (US DOT): DOT Proper Shipping Name: Not dangerous goods. DOT Hazard Class: UNNAN Number:         Hazard Class: UN/NA Number: Hazard Class:         Hazard Class: UN/NA Number: Hazard Class:         Additional Transport in accordance with local, state, and federal regulations.         Information         EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists         Co				Section 11. Toxico	ological Infor	mation		
NTP         IARC         ACGIH           NA         Anti-MPO (human) ELISA Strip Plate         n.a.         n.a.         n.a.         n.a.         n.a.           Section 12. Ecological Information           12.1 Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.           12.2 Persistence and No data available. Degradability:           12.3 Bioaccumulative No data available.           Potential:         12.4 Mobility in Soll: No data available.         Section 13. Disposal Considerations           12.6 Other adverse effects: No data available.           Section 13. Disposal Considerations           13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.           IDOT Proper Shipping Name: Not dangerous goods. DOT Hazard Class: UN/NA Number:           14.1 LAND TRANSPORT (US DOT): DOT Proper Shipping Name: Not dangerous goods. UN Number:           Hazard Class: UN/NA Number:           14.1 LAND TRANSPORT (ICAO/IATA): ICAO/IATA Shipping Name: Not dangerous goods. UN Number:           Hazard Class: UN/NA Number:           Additional Transport           Transport in accordance with local, state, and federal regulations.           Information <t< td=""><td>11.1</td><td></td><td></td><td>The toxicological effects of this</td><td>s product have not t</td><td>been thoroughly st</td><td>udied.</td><td></td></t<>	11.1			The toxicological effects of this	s product have not t	been thoroughly st	udied.	
NA       Anti-MPO (human) ELISA Strip Plate       n.a.       n.a.       n.a.         Section 12. Ecological Information         12.1 Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.         12.1 Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.         12.2 Persistence and No data available. Degradability:         12.3 Bioaccumulative No data available. Potential:         12.4 Mobility in Soil: No data available.         Section 13. Disposal Considerations         12.6 Other adverse effects: No data available.         Section 13. Disposal Considerations         13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         DOT Proper Shipping Name: Not dangerous goods. DOT Hazard Class: UN/NA Number:         14.1 LAND TRANSPORT (European ADR/RID): 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 Information         Section 15. Regulatory Information         EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists         CAS# Hazardous Components (Chemical Name)       S. 302 (EHS)       S. 30	CAS		-	ponents (Chemical Name)	NTP	IARC	ACGIH	OSHA
Section 12. Ecological Information         Section 12. Ecological Information         12.1 Toxicity: Runoff trom fire control or dilution water may cause pollution.         Runoff from fire control or dilution water may cause pollution.         12.2 Persistence and No data available.         Degradability:         12.3 Bioaccumulative No data available.         Potential:         12.4 Mobility in Soil: No data available.         Section 13. Disposal Considerations         13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         Section 14. Transport Information         14.1 LAND TRANSPORT (US DOT):         DOT Proper Shipping Name: Not dangerous goods.         UNNA Number:         14.1 LAND TRANSPORT (European ADR/RID):         ADR/RID Shipping Name: Not dangerous goods.         UNNA Number:         Hazard Class:         14.3 AIR TRANSPORT (ICAO/IATA):         ICAO/IATA Shipping Name: Not dangerous goods.         Additional Transport In accordance with local, state, and federal regulations.         Information         EPA SARA (Superfund Amendments and Reauthorization								n.a.
12.1       Toxicity:       Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.         12.2       Persistence and Degradability:       No data available.         12.3       Bioaccumulative Potential:       No data available.         12.4       Mobility in Soil:       No data available.         12.5       Results of PBT and vPvB       No data available.         12.6       Other adverse effects:       No data available.         12.6       Other adverse effects:       No data available.         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         14.1       LAND TRANSPORT (US DOT): DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:         14.1       LAND TRANSPORT (European ADR/RID): ADR/RID Shipping Name:       Not dangerous goods.         UN Number: Hazard Class:       Not dangerous goods.       UN Vana Shipping Name:         14.3       AIR TRANSPORT (ICAO/IATA): ICAO/IATA Shipping Name:       Not dangerous goods.         Information:       Section 15. Regulatory Information         EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists <tr< td=""><td></td><td></td><td>, ,</td><td>-</td><td>ogical Inform</td><td></td><td></td><td></td></tr<>			, ,	-	ogical Inform			
Runoff from fire control or dilution water may cause pollution.         12.2       Persistence and No data available. Degradability:         12.3       Bioaccumulative No data available. Potential:         12.4       Mobility in Soil: No data available.         12.5       Results of PBT and vPvB No data available. assessment:         12.6       Other adverse effects: No data available.         12.6       Other adverse effects: No data available.         12.1       Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         13.1       Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         14.1       LAND TRANSPORT (US DOT): DOT Proper Shipping Name: Not dangerous goods. DOT Hazard Class: UN/NA Number:         14.1       LAND TRANSPORT (European ADR/RID): ADR/RID Shipping Name: Not dangerous goods. UN Number: Hazard Class:         14.3       AIR TRANSPORT (ICAO/IATA): ICAO/IATA Shipping Name: Not dangerous goods.         IICAO/IATA Shipping Name: Not dangerous goods.         Information:         Section 15. Regulatory Information         EPA SARA (Superfund Amendments and Reauthorization Act or 1986) Lists         CAS #       Hazardous Components (Chemical Name)       S. 302 (EHS)       S. 304 RQ       S. 31	12 1	Toxicity			•			
12.2       Persistence and No data available.         Degradability:         12.3       Bioaccumulative No data available.         Potential:         12.4       Mobility in Soil: No data available.         12.5       Results of PBT and vPvB No data available.         assessment:         12.6       Other adverse effects: No data available.         Image: Section 13. Disposal Considerations         13.1       Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         Image: Section 14. Transport Information         14.1       LAND TRANSPORT (US DOT):         DOT Proper Shipping Name: Not dangerous goods.         DOT Hazard Class:         UN/NA 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:       Transport in accordance with local, state, and federal regulations.         Information:       Section 15. Regulatory Information         EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists       S. 304 RQ       S. 31	12.1	TOXICITY	•			e pollution		
Degradability:         12.3       Bioaccumulative       No data available.         Potential:       12.4       Mobility in Soil:       No data available.         12.5       Results of PBT and vPvB       No data available.       assessment:         12.6       Other adverse effects:       No data available.         Section 13. Disposal Considerations         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         Section 14. Transport Information         14.1       LAND TRANSPORT (US DOT):       DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:       Not dangerous goods.       UN Number:         14.1       LAND TRANSPORT (European ADR/RID):       ADR/RID Shipping Name:       Not dangerous goods.         UN Number:       Hazard Class:       Not dangerous goods.       UN Number:         H42ard Class:       11       CAO/IATA Shipping Name:       Not dangerous goods.       Additional Transport         Transport       Transport in accordance with local, state, and federal regulations.       Information:         Section 15. Regulatory Information         Section 15. Regulatory Information         EPA SARA (Superfund Amendments and Reauthorization Act o	40.0	Develot			ion water may cauc			
12.3       Bioaccumulative       No data available.         Potential:       No data available.         12.4       Mobility in Soil:       No data available.         12.5       Results of PBT and vPvB       No data available.         assessment:       12.6       Other adverse effects:       No data available.         12.6       Other adverse effects:       No data available.         12.6       Other adverse effects:       No data available.         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         14.1       LAND TRANSPORT (US DOT):       DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:       Hazard Class:       UN/NA Number:         14.1       LAND TRANSPORT (European ADR/RID):       ADR/RID Shipping Name:       Not dangerous goods.         UN Number:       Hazard Class:       14.3       AIR TRANSPORT (ICAO/IATA):       ICAO/IATA Shipping Name:       Not dangerous goods.         ICAO/IATA Shipping Name:       Not dangerous goods.       Additional Transport       Transport in accordance with local, state, and federal regulations.         Information:       Section 15. Regulatory Inf	12.2			no data avaliable.				
Potential:         12.4       Mobility in Soil:       No data available.         12.5       Results of PBT and vPvB       No data available.         assessment:       12.6       Other adverse effects:       No data available.         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         14.1       LAND TRANSPORT (US DOT):       DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:       Hazard Class:       UN/NA Number:         H4.1       LAND TRANSPORT (European ADR/RID):       ADR/RID Shipping Name:       Not dangerous goods.         UN Number:       Hazard Class:       Hazard Class:       Transport in accordance with local, state, and federal regulations.         Information:       ICAO/IATA Shipping Name:       Not dangerous goods.       Additional Transport in accordance with local, state, and federal regulations.         Information:       Section 15. Regulatory Information       EPA SARA (Superfund Amendm								
12.4       Mobility in Soil: No data available.         12.5       Results of PBT and vPvB No data available.         assessment:       12.6         Other adverse effects: No data available.         Section 13. Disposal Considerations         13.1       Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         Image: Section 14. Transport Information         14.1       LAND TRANSPORT (US DOT):         DOT Proper Shipping Name: Not dangerous goods.         DOT Hazard Class:         UN/NA Number:         14.1       LAND TRANSPORT (European ADR/RID):         ADR/RID Shipping Name: Not dangerous goods.         UN Number:         Hazard Class:         UN Number:         Hazard Class:         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. 31	12.3			No data available.				
12.5       Results of PBT and vPvB No data available. assessment:         12.6       Other adverse effects:       No data available.         Image: Section 13. Disposal Considerations       Image: Section 13. Disposal Considerations         13.1       Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         Image: Section 14. Transport Information       Image: Section 14. Transport Information         14.1       LAND TRANSPORT (US DOT):       DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       Image: Not dangerous goods.       Image: Not dangerous goods.       Image: Not dangerous goods.         UN/NA Number:       Hazard Class:       Image: Not dangerous goods.       Image: Not dangerous goods.         4.1.1       LAND TRANSPORT (European ADR/RID):       Image: Not dangerous goods.       Image: Not dangerous goods.         MDR/RID Shipping Name:       Not dangerous goods.       Image: Not dangerous goods.       Image: Not dangerous goods.         IA.3       AIR TRANSPORT (ICAO/IATA):       Image: Not dangerous goods.       Image: Not dangerous goods.         IA.3       AIR TRANSPORT (ICAO/IATA):       Image: Not dangerous goods.       Image: Not dangerous goods.         IA.4       Additional Transport       Transport in accordance with local, state, and federal regulations.       Image: Not dangerous goods.								
assessment:         12.6 Other adverse effects: No data available.         Section 13. Disposal Considerations         13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         Section 14. Transport Information         14.1 LAND TRANSPORT (US DOT): DOT Proper Shipping Name: Not dangerous goods. DOT Hazard Class: UN/NA Number:         14.1 LAND TRANSPORT (European ADR/RID): ADR/RID Shipping Name: Not dangerous goods. UN Number: Hazard Class:       Not dangerous goods. UN Number: Hazard Class:         14.3 AIR TRANSPORT (ICAO/IATA): ICAO/IATA Shipping Name: Not dangerous goods.       Not dangerous goods.         Additional Transport Iransport 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. 31	12.4	Mobility	in Soil:	No data available.				
12.6 Other adverse effects:       No data available.         Section 13. Disposal Considerations         13.1 Waste Disposal Method:       Dispose in accordance with local, state, and federal regulations.         Section 14. Transport Information         14.1 LAND TRANSPORT (US DOT):         DOT Proper Shipping Name:         Not dangerous goods.         DOT Hazard Class:         UN/NA Number:         14.1 LAND TRANSPORT (European ADR/RID):         ADR/RID Shipping Name:         Not dangerous goods.         UN Number:         Hazard Class:         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. 31	12.5	Results	of PBT and vPvB	No data available.				
Section 13. Disposal Considerations         Section 13. Disposal Considerations         Section 14. Transport Information         Information         Information         Section 14. Transport Information         Information       Information		assessr	ment:					
13.1       Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.         Section 14. Transport Information         14.1       LAND TRANSPORT (US DOT):         DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:         14.1       LAND TRANSPORT (European ADR/RID):         ADR/RID Shipping Name:       Not dangerous goods.         UN Number:       Hazard Class:         Hazard Class:       Not dangerous goods.         UN Number:       Hazard Class:         Hazard Class:       Not dangerous goods.         ADR/RID 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. 31	12.6	Other a	dverse effects:	No data available.				
Section 14. Transport Information         14.1 LAND TRANSPORT (US DOT):         DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:         14.1 LAND TRANSPORT (European ADR/RID):       ADR/RID Shipping Name:       Not dangerous goods.         UN/NA Number:       Hazard Class:       UN Number:         Hazard Class:       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. 31				Section 13. Dispo	sal Conside	rations		
14.1       LAND TRANSPORT (US DOT):         DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:         14.1       LAND TRANSPORT (European ADR/RID):         ADR/RID Shipping Name:       Not dangerous goods.         UN Number:       Hazard Class:         Hazard Class:       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       S. 304 RQ         CAS #       Hazardous Components (Chemical Name)       S. 302 (EHS)       S. 304 RQ       S. 31	13.1	Waste I	Disposal Method:	Dispose in accordance with loo	cal, state, and feder	al regulations.		
DOT Proper Shipping Name:       Not dangerous goods.         DOT Hazard Class:       UN/NA Number:         14.1       LAND TRANSPORT (European ADR/RID):         ADR/RID Shipping Name:       Not dangerous goods.         UN Number:       Hazard Class:         Hazard Class:       Not dangerous goods.         UN Number:       Hazard Class:         Hazard Class:       Not dangerous goods.         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 Amendmenter and Reauthorization Act or 1986) Lists         CAS #       Hazardous Components (Chemical Name)       S. 302 (EHS)       S. 304 RQ       S. 31				Section 14. Trar	nsport Inform	nation		
DOT Hazard Class: UN/NA Number: 14.1 LAND TRANSPORT (European ADR/RID): 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 ICAO/IATA): ICAO/IATA Shipping Name: Not dangerous goods. Additional Transport Transport in accordance with local, state, and federal regulations. Information: EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists CAS # Hazardous Components (Chemical Name) S. 302 (EHS) S. 304 RQ S. 31	14.1	LAND 1	RANSPORT (US	DOT):				
DOT Hazard Class: UN/NA Number: 14.1 LAND TRANSPORT (European ADR/RID): 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 ICAO/IATA): ICAO/IATA Shipping Name: Not dangerous goods. Additional Transport Transport in accordance with local, state, and federal regulations. Information: EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists CAS # Hazardous Components (Chemical Name) S. 302 (EHS) S. 304 RQ S. 31	D	OT Prope	er Shipping Name	: Not dangerous goods.				
14.1       LAND TRANSPORT (European ADR/RID):         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. 31		-						
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. 31	U	N/NA Nu	mber:					
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       S. 302 (EHS)       S. 304 RQ       S. 31	14.1	LAND 1	RANSPORT (Eur	opean ADR/RID):				
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. 31								
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. 31				not dangerede geede.				
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. 31	-							
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. 31				1474).				
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. 31								
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. 31				0 0	acal state and fod	oral regulations		
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. 31			nsport	Transport in accordance with	ocal, state, and led	erai regulations.		
EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists         CAS #       Hazardous Components (Chemical Name)       S. 302 (EHS)       S. 304 RQ       S. 31	mon							
CAS # Hazardous Components (Chemical Name) S. 302 (EHS) S. 304 RQ S. 31				Section 15. Regu	latory Inform	nation		
	EPA S	SARA (Sı	uperfund Amendn	nents and Reauthorization Act	of 1986) Lists			
NA Anti-MPO (human) ELISA Strip Plate No No No	CAS	AS # Hazardous Components (Chemical Name) S. 302 (EHS) S. 304 RQ S. 313 (TRI)				B (TRI)		
		NA	Anti-MPO (huma	n) ELISA Strip Plate	No	No	No	
CAS # Hazardous Components (Chemical Name) Other US EPA or State Lists	CAS	#	Hazardous Com	ponents (Chemical Name)	Other US EPA	or State Lists		
NA Anti-MPO (human) ELISA Strip Plate CAA HAP,ODC: No; CWA NPDES: No; TSCA PROP.65: No		NA	Anti-MPO (huma	n) ELISA Strip Plate		: No; CWA NPDE	S: No; TSCA	: No; CA
			+		<b> </b>			



Page: 5 of 5

Revision: 06/21/2016

Regulatory Information Statement:	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.
	Section 16. Other Information
Revision Date:	06/21/2016
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.



			Supersedes Revision: 03/27/2015				
	acc	ording to Regulation (EC) No. 1907/2006 as amended by (	EC) No. 1272/2008				
	Section 1.	Identification of the Substance/Mixture and of th	e Company/Undertaking				
1.1	Product Code:	10011355					
	Product Name:	HRP Stop Solution					
1.2	Relevant identified uses o	f the substance or mixture and uses advised aga	ainst:				
	Relevant identified uses						
1.3	Details of the Supplier of t	-					
1.5		the Salety Data Sheet.					
	Company Name:	Cayman Chemical Company					
	company nume.	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 nur	nber:					
	Emergency Contact:	CHEMTREC Within USA and Canada:	+1 (800)424-9300				
	Emergency contact.	CHEMTREC Outside USA and Canada:	+1 (703)527-3887				
		Section 2. Hazards Identifica	ation				
2.1	Classification of the Subs	tance or Mixture:					
	Corrosive To Metals, Ca	tegory 1					
	Skin Corrosion/Irritatior	a, Category 2					
	Serious Eye Damage/Ey	e Irritation, Category 1					
2.2	Label Elements:						
	<b>^</b>						
	GHS Signal Word:	Danger					
	GHS Hazard Phrases:	-					
	H290: May be corrosive to	o metals.					
	H315: Causes skin irritation	on.					
	H318: Causes serious ey	e damage.					
	GHS Precaution Phrase						
	P234: Keep only in origina						
	P264: Wash {hands} thoroughly after handling.						
	P280: Wear {protective gloves/protective clothing/eye protection/face protection}.						
	GHS Response Phrases						
		Vash with plenty of soap and water.	Demove context lenges, if present and easy				
		ES: Rinse cautiously with water for several minutes.	Remove contact lenses, il present and easy				
	to do. Continue rinsing.	POISON CENTER or doctor/physician					
	-	POISON CENTER or doctor/physician.					
		n occurs, get medical advice/attention.					
		iminated clothing and wash it before reuse.					
	P390: Absorb spillage to						
	GHS Storage and Dispo						
	Please refer to Section 7	for Storage and Section 13 for Disposal information.					



Revision:	08/01/2016
Supersedes Revision:	03/27/2015

2.3 Adverse Human Health Causes			Causes serious eye damage.	uses serious eye damage.				
Effects and Symptoms:			Causes skin irritation.					
			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							
		Sect	tion 3. Composition	/Information c	on Ingredie	nts		
CAS : RTEC		Hazardous Comp REACH Registra	oonents (Chemical Name)/ tion No.	Concentration	EC No./ EC Index No.	GHS Classification		
	7664-93-9 Sulfuric acid WS5600000			4.904 %	231-639-5 016-020-00-8	Skin Corr. 1A: H314		
7732 ZC011	2-18-5 0000	Water		95.096 %	231-791-2 NA	No data available.		
			Section 4. Fi	rst Aid Measu	res			
4.1	Descrip	tion of First Aid						
	Measur	es:						
	<b>In Case of Inhalation:</b> Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.			e oxygen by trained				
	In Case	of Skin Contact:	Immediately wash skin with s	oap and plenty of wa	ter for at least 15	minutes. Remove		
	contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.					ash clothing before reuse.		
	In Case	of Eye Contact:						
	I. 0	- <b>f</b> la <b>f</b> la	examined and tested by medi			na is same is a Navar sive		
	In Case	<b>use of Ingestion:</b> Do NOT induce vomiting. Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention.						
			Section 5. Fire	<u> </u>				
5.1	Suitable Media:	e Extinguishing	Use alcohol-resistant foam, c	arbon dioxide, water,	, or dry chemical	spray.		
Unsuitable Extinguishing A solid water stream Media:			A solid water stream may be	inefficient.				
5.2								
	Hazards:							
			No data available.					
Flash Pt:		t:	No data.					
	Explosive Limits:		LEL: No data. UEL: No data.					
Autoignition Pt: No o			No data.					
5.3	<b>Fire Fighting Instructions:</b> 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

			Jantal Dalas M		
			dental Release Measures		
6.1 <b>Protective Precautions</b> , Avoid breathing vapors and provide adequate ventilation.					
			vear a NIOSH approved self-contained breathing		
	Emergency Procedures:	al protection (rubber boots, safety goggles, and h	leavy rubber gloves).		
5.2	Environmental Take steps to avoid release into the environment, if safe to do so.				
<ul><li>6.3 Methods and Material For Contain spill and collect, as appropriate.</li></ul>					
).3		•	, as appropriate. vaste container for disposal in accordance with Ic	ocal regulations	
	Up:			cal regulations.	
	ор. 	Cention 7	londling and Storege		
	Dressutions To Do Tokor		Handling and Storage		
7.1	Precautions To Be Taker	Avoid breatning dustrium Avoid prolonged or repea			
	in Handling:				
7.2	Precautions To Be Taker in Storing:		i information listed on the product insert.		
	in otoring.				
	Sec	tion 8. Exposure	Controls/Personal Protection		
3.1	Exposure Parameters:				
CAS #		Jurisdiction	Recommended Exposure Limits	Notations	
7664-9	93-9 Sulfuric acid	ACGIH TLV	TLV: (1 mg/m3) STEL: (3 mg/m3)		
		<b>–</b> 14			
		I France VI	I TWA 1 0 mg/m3		
		France VL	TWA: 1.0 mg/m3 STEL: 3.0 mg/m3		
		OSHA PELs	-		
3.2	Exposure Controls:		STEL: 3.0 mg/m3		
	Exposure Controls: Engineering Controls	OSHA PELs	STEL: 3.0 mg/m3	ontrols to control airbo	
	-	OSHA PELs	STEL: 3.0 mg/m3 PEL: 1 mg/m3	ontrols to control airbor	
3.2 3.2.1 3.2.2	Engineering Controls	OSHA PELs Use process enclosures, levels below recommend	STEL: 3.0 mg/m3 PEL: 1 mg/m3	ontrols to control airbor	
3.2.1	Engineering Controls (Ventilation etc.):	OSHA PELs Use process enclosures, levels below recommend	STEL: 3.0 mg/m3 PEL: 1 mg/m3	ontrols to control airbo	
3.2.1	Engineering Controls (Ventilation etc.): Personal protection equi	OSHA PELs Use process enclosures, levels below recommence	STEL: 3.0 mg/m3 PEL: 1 mg/m3 local exhaust ventilation, or other engineering co led exposure limits.	ontrols to control airbor	
3.2.1	Engineering Controls (Ventilation etc.): Personal protection equi Eye Protection:	OSHA PELs Use process enclosures, levels below recommend ipment: Safety glasses Compatible chemical-res	STEL: 3.0 mg/m3 PEL: 1 mg/m3 local exhaust ventilation, or other engineering co led exposure limits.	ontrols to control airbo	
3.2.1	Engineering Controls (Ventilation etc.): Personal protection equi Eye Protection: Protective Gloves: Other Protective Clothing Respiratory Equipment	OSHA PELs Use process enclosures, levels below recommend ipment: Safety glasses Compatible chemical-res g:Lab coat	STEL: 3.0 mg/m3 PEL: 1 mg/m3 local exhaust ventilation, or other engineering co led exposure limits.	ontrols to control airbo	
3.2.1	Engineering Controls (Ventilation etc.): Personal protection equi Eye Protection: Protective Gloves: Other Protective Clothing Respiratory Equipment (Specify Type):	OSHA PELs Use process enclosures, levels below recommend ipment: Safety glasses Compatible chemical-res g:Lab coat NIOSH approved respira	STEL: 3.0 mg/m3 PEL: 1 mg/m3 local exhaust ventilation, or other engineering co led exposure limits.	ontrols to control airbo	
3.2.1	Engineering Controls (Ventilation etc.): Personal protection equi Eye Protection: Protective Gloves: Other Protective Clothing Respiratory Equipment (Specify Type): Work/Hygienic/Maintena	OSHA PELs Use process enclosures, levels below recommend ipment: Safety glasses Compatible chemical-res g:Lab coat NIOSH approved respira n Do not take internally.	STEL: 3.0 mg/m3 PEL: 1 mg/m3 local exhaust ventilation, or other engineering ca led exposure limits.		
3.2.1	Engineering Controls (Ventilation etc.): Personal protection equi Eye Protection: Protective Gloves: Other Protective Clothing Respiratory Equipment (Specify Type):	OSHA PELs Use process enclosures, levels below recommend ipment: Safety glasses Compatible chemical-res g:Lab coat NIOSH approved respira n Do not take internally. Facilities storing or utilizi	STEL: 3.0 mg/m3 PEL: 1 mg/m3 local exhaust ventilation, or other engineering co led exposure limits.		
3.2.1	Engineering Controls (Ventilation etc.): Personal protection equi Eye Protection: Protective Gloves: Other Protective Clothing Respiratory Equipment (Specify Type): Work/Hygienic/Maintena	OSHA PELs Use process enclosures, levels below recommend ipment: Safety glasses Compatible chemical-res g:Lab coat NIOSH approved respira n Do not take internally.	STEL: 3.0 mg/m3 PEL: 1 mg/m3 local exhaust ventilation, or other engineering co led exposure limits. sistant gloves itor, as conditions warrant.		



	5	Section 9. Physical and Chemical Properties				
).1	Information on Basic Physical and Chemical Properties					
	Physical States:	[ ] Gas [ X ] Liquid [ ] Solid				
	Appearance and Odor:	Solution				
	pH:	7.0				
	Melting Point:	No data.				
	Boiling Point:	No data.				
	Flash Pt:	No data.				
	Evaporation Rate:	No data.				
	Flammability (solid, gas)	No data available.				
	Explosive Limits:	LEL: No data. UEL: No data.				
	Vapor Pressure (vs. Air o	or mm No data.				
	Hg):					
	Vapor Density (vs. Air =	1): No data.				
	Specific Gravity (Water =	<b>1):</b> No data.				
	Solubility in Water:	No data.				
	Octanol/Water Partition	No data.				
	Coefficient:					
	Autoignition Pt:	No data.				
	Decomposition Tempera	ture: No data.				
	Viscosity:	No data.				
9.2	Other Information					
	Percent Volatile:	No data.				
		Section 10. Stability and Reactivity				
10.1	Reactivity:	No data available.				
10.2	Stability:	Unstable [ ] Stable [ X ]				
0.3	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:	No data available.				
0.5	Incompatibility - Material					
	To Avoid:	halogens				
		hydrides				
		lithium				
		metal acetylides				
		metals				
		organic material				
		oxides				
		potassium chlorate				
		potassium perchlorate potassium permanganate				
		sodium				
		strong oxidizing agents				
		strong reducing agents				
0.6	Hazardous	carbon dioxide				
0.0	Decomposition or	hydrogen cyanide				
	Byproducts:	hydrogen sulfide				
	Byproducis.	,				
			Multi-region form			



Multi-region format

11.1	Informat	ion on	The toxicological effects of t	this product have not been t				
	IOXICOID	ogical Effects:	Section 11. Toxicological Information         The toxicological effects of this product have not been thoroughly studied.         Sulfuric acid - Toxicity Data: Oral LD50 (rat): 2,140 mg/kg; Inhalation TCLO (human): 0.63         mg/m3; Inhalation LC50 (mouse): 320 mg/m3; Inhalation LC50 (guinea pig): 18 mg/m3 (8hr);					
			Sulfuric acid - Irritation Data: Eyes (rabbit): 5 mg (30s) severe;					
		Toxicological	Sulfuric acid - Investigated a	-				
Effects:			Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.					
			See actual entry in RTECS for complete information. Sulfuric Acid RTECS Number: WS5600000					
Carci	nogenicity	/:	NTP? No IARC Monog		ulated? No			
CAS		i	ponents (Chemical Name)	NTP	IARC	ACGIH	OSHA	
766	4-93-9	Sulfuric acid		Known	Unknown	A2	n.a.	
773	2-18-5	Water		n.a.	n.a.	n.a.	n.a.	
		ļ	Section 12. Ec	ological Informatic	<u>,</u> n	-		
12.1	Toxicity		Avoid release into the enviro					
		-	Runoff from fire control or d	ilution water may cause poll	ution.			
12.2	Persiste	nce and	No data available.					
	Degrada							
12.3	-	mulative	No data available.					
-	Potentia	Potential:						
12.4								
12.5	Results	Results of PBT and vPvB No data available.						
	assessm	nent:						
12.6	Other ad	lverse effects:	No data available.					
			Section 13. Disp	oosal Consideratio	ns			
13.1	Waste D	isposal Method:	Dispose in accordance with	local, state, and federal reg	ulations.			
			Section 14. Tr	ansport Informatic	n			
14.1	LAND T	RANSPORT (US I	DOT):					
D	OT Prope	r Shipping Name:	Sulfuric acid [with 51%	or less acid]				
D	OT Hazar	d Class:	8 CORR	OSIVE				
U	N/NA Nun	nber:	2796	Packing Group:		II		
14.1 A		RANSPORT (Euro hipping Name:	opean ADR/RID): Sulfuric acid [with 51%	or less acid]				
	N Number		2796	Packing Group:		П		
н	azard Cla	SS:	8 - CORROSIVE					
н	azard Cla	55:	8 - COKKUSIVE					



Revision: 08/01/2016 Supersedes Revision: 03/27/2015

CHIMICAL				Super	sedes Revision: 03/27/2015	
14.3 AIR TR	ANSPORT (ICAO/	IATA):				
ICAO/IATA	A Shipping Name:	Sulfuric acid [with 51% or I	ess acid]			
UN Number:		2796	Packing Gro	oup:	II	
Hazard Class:		8 - CORROSIVE	IATA Classi	fication:	8	
Additional Tra	ansport	Transport in accordance with le	ocal, state, and feder	ral regulations.		
Information:						
		Section 15. Regu	latory Informa	ation		
EPA SARA (S	uperfund Amendm	nents and Reauthorization Act	of 1986) Lists			
CAS #	Hazardous Com	ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
7664-93-9	Sulfuric acid		Yes 1000 LB	Yes 1000 LB	Yes	
7732-18-5	Water		No	No	No	
CAS #		nenente (Chemical Name)	Other US EPA or			
7664-93-9	Sulfuric acid	ponents (Chemical Name)		No; CWA NPDES:		
7004-93-9			Inventory; CA Pf		NO, TSCA. 165 -	
7732-18-5	Water		CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -			
			Inventory; CA PROP.65: No			
Regulatory Inf	ormation	This SDS was prepared in acc	ordance with 29 CFR	R 1910.1200 and Re	gulation (EC)	
Statement:		No.1272/2008.				
		Section 16. Ot	her Informatio	on		
Revision Date	:	08/01/2016				
Additional Info	ormation About	No data available.				
This Product:						
This Product: Company Policy or Disclaimer:		DISCLAIMER: This information currently available to us. Howe express or implied, with respec use. Users should make their their particular purposes.	ver, we make no war t to such information	rranty of merchantal	bility or any other warranty, b liability resulting from its	