

		accord	ing to Regulation (EC) No. 190	7/2006 as amended by	(EC) No. 1272/200	8		
		Section 1. Ide	ntification of the Substan	ce/Mixture and of t	he Company/Ur	ndertaking		
1.1	Product		20912					
Product Name: Glucose pentasulfate (potassium salt)								
1.2			ne substance or mixture a	-	-			
	Releva	Int 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					
	Information: Cayman Chemical Con			any	+1 (734	+1 (734)971-3335		
1.4	Emerge	ncy telephone numbe	er:					
	Emergency Contact:		CHEMTREC Within USA			+1 (800)424-9300 +1 (703)527-3887		
			CHEMTREC Outside USA and Canada:					
			Section 2. Haz	zards Identific	ation			
2.1	Classific	cation of the Substan	ce or Mixture:					
2.2	Label Elements:							
	GHS S	ignal Word:	None					
	GHS Hazard Phrases:							
	Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.							
	GHS Precaution Phrases:							
	No phrases apply.							
	GHS Response Phrases:							
	No phrases apply. GHS Storage and Disposal Phrases:							
		•	Storage and Section 13 for	Disposal information	1			
2.3			aterial may be irritating to the	•		piratory tract.		
	Effects		ay be harmful by inhalation		• •			
		М	ay cause eye, skin, or resp	iratory system irritatio	on.			
		Тс	o the best of our knowledge	, the toxicological pro	operties have not	been thoroughly investigated.		
		Section	n 3. Composition	/Information c	on Ingredier	nts		
	CAS # / Hazardous Compo RTECS # REACH Registration		ents (Chemical Name)/ n No.	Concentration	EC No./ EC Index No.	GHS Classification		
3594 NA	135-44-2	Glucose pentasulfate (p	otassium salt)	100.0 %	NA NA	No data available.		

Multi-region format



Revision: 11/18/2016

Multi-region format

		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 andNo 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 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 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 For Contain spill and collect, as appropriate.					
	Containment and Cleanir Up:	$\mathbf{g}$ Transfer to a chemical waste container for disposal in accordance with local regulations.				
		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:					



Revision: 11/18/2016

	HEMICAL						
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 equipment:						
	Eye Protection:	y glasses					
	Protective Gloves:	patible 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 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 []Liquid [X]Solid					
	Appearance and Odor:	A solid					
	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 = 7	1): No data.					
	Solubility in Water:	No data.					
	Octanol/Water Partition	No data.					
	Coefficient:						
	Autoignition Pt:	No data.					
	Decomposition Temperate	ure: No data.					
	Viscosity:	No data.					
9.2	Other Information						
	Percent Volatile:	No data.					
	Molecular Formula & Weig	ght: C6H7O21S5 • 5K 770.9					



Revision: 11/18/2016

Multi-region format

0.2 S 0.3 S P 0.4 C 0.5 In T 0.6 H D B 1.1 In T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	To Avoid: Hazardous Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C	No data available.	gical Informa duct have not been NTP n.a. cal Informat	ation n thoroughly st		OSHA n.a.			
0.3 S P 0.4 C 0.5 In T 0.6 H D B 1.1 In T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	Stability Note(s): Polymerization: Conditions To Avoid: Incompatibility - Mater To Avoid: Hazardous Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	Stable if stored in accordance with Will occur [ ] Will not occur [ X No data available. Tials strong oxidizing agents carbon dioxide carbon monoxide sulfur oxides <u>Section 11. Toxicolog</u> The toxicological effects of this proc omponents (Chemical Name) asulfate (potassium salt) <u>Section 12. Ecological</u> Avoid release into the environment. Runoff from fire control or dilution w No data available.	gical Informa duct have not been NTP n.a. cal Informat	ation n thoroughly st	udied.	_			
P 0.4 C 0.5 In T 0.6 H D B 1.1 In T CAS # 359435 2.1 T 2.2 P 2.3 B 2.3 B 2.4 M 2.5 R	Polymerization: Conditions To Avoid: Incompatibility - Mater To Avoid: Hazardous Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	Will occur []       Will not occur [X         No data available.         rials strong oxidizing agents         carbon dioxide         carbon monoxide         sulfur oxides         Section 11. Toxicolog         The toxicological effects of this proc         omponents (Chemical Name)         asulfate (potassium salt)         Section 12. Ecological         Avoid release into the environment.         Runoff from fire control or dilution w         No data available.	gical Informa duct have not been NTP n.a. cal Informat	ation n thoroughly st	udied.	_			
0.4 C 0.5 Ir 0.6 H D B 1.1 Ir T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	Conditions To Avoid: Incompatibility - Mater To Avoid: Hazardous Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	No data available. Tials strong oxidizing agents carbon dioxide carbon monoxide sulfur oxides <u>Section 11. Toxicolog</u> The toxicological effects of this proc omponents (Chemical Name) asulfate (potassium salt) <u>Section 12. Ecological</u> Avoid release into the environment. Runoff from fire control or dilution w No data available.	gical Information duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
0.5 Ir T 0.6 H D B 1.1 Ir T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	Incompatibility - Mater To Avoid: Hazardous Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	rials strong oxidizing agents carbon dioxide carbon monoxide sulfur oxides <u>Section 11. Toxicolog</u> The toxicological effects of this prod omponents (Chemical Name) asulfate (potassium salt) <u>Section 12. Ecological</u> Avoid release into the environment. Runoff from fire control or dilution w No data available.	duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
0.6 H D B 1.1 Ir T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	To Avoid: Hazardous Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	carbon dioxide carbon monoxide sulfur oxides <b>Section 11. Toxicolog</b> The toxicological effects of this prod omponents (Chemical Name) asulfate (potassium salt) Section 12. Ecological Avoid release into the environment. Runoff from fire control or dilution w No data available.	duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
0.6 H D B 1.1 Ir T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	Hazardous Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	carbon monoxide sulfur oxides Section 11. Toxicolog The toxicological effects of this prod omponents (Chemical Name) asulfate (potassium salt) Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available.	duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
D B 1.1 Ir T 2.2 P 2.3 B 2.3 B 2.4 M 2.5 R	Decomposition or Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	carbon monoxide sulfur oxides Section 11. Toxicolog The toxicological effects of this prod omponents (Chemical Name) asulfate (potassium salt) Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available.	duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
B 1.1 Ir T 2.2 P 2.3 B 2.3 P 2.4 M 2.5 R	Byproducts: Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	sulfur oxides  Section 11. Toxicolog  The toxicological effects of this proc  omponents (Chemical Name)  asulfate (potassium salt)  Section 12. Ecologic  Avoid release into the environment. Runoff from fire control or dilution w No data available.	duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
1.1 Ir T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.3 B P 2.4 M 2.5 R	Information on Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	Section 11. Toxicolog The toxicological effects of this pro- omponents (Chemical Name) asulfate (potassium salt) Section 12. Ecologic Avoid release into the environment Runoff from fire control or dilution w No data available.	duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	The toxicological effects of this proc omponents (Chemical Name) asulfate (potassium salt) Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available.	duct have not been NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
T CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	Toxicological Effects: Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	omponents (Chemical Name) asulfate (potassium salt) Section 12. Ecologie Avoid release into the environment. Runoff from fire control or dilution w No data available.	NTP n.a. cal Informat	IARC n.a.	ACGIH	_			
CAS # 359435 2.1 T 2.2 P D 2.3 B P 2.4 M 2.5 R	Hazardous C 5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	Avoid release into the environment. Runoff from fire control or dilution w No data available.	n.a. cal Informat	n.a.		_			
2.1 T 2.2 P 2.3 B 2.3 P 2.4 M 2.5 R	5-44-2 Glucose pent Toxicity: Persistence and Degradability: Bioaccumulative	Avoid release into the environment. Runoff from fire control or dilution w No data available.	n.a. cal Informat	n.a.		_			
2.1 T 2.2 P D 2.3 B 2.4 M 2.5 R	Toxicity: Persistence and Degradability: Bioaccumulative	Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available.	cal Informat		n.a.	n.a.			
2.2 P D 2.3 B P 2.4 M 2.5 R	Toxicity: Persistence and Degradability: Bioaccumulative	Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution w No data available.		ion					
2.2 P D 2.3 B P 2.4 M 2.5 R	Persistence and Degradability: Bioaccumulative	Avoid release into the environment. Runoff from fire control or dilution w No data available.		ION					
2.2 P D 2.3 B P 2.4 M 2.5 R	Persistence and Degradability: Bioaccumulative	Runoff from fire control or dilution w No data available.							
D 2.3 B P 2.4 M 2.5 R	Degradability: Bioaccumulative	No data available.	vater may cause p	Runoff from fire control or dilution water may cause pollution.					
D 2.3 B P 2.4 M 2.5 R	Degradability: Bioaccumulative								
2.3 B P 2.4 M 2.5 R	Bioaccumulative								
P 2.4 M 2.5 R									
2.4 M 2.5 R	Potential:	No data available.							
2.5 R									
	Mobility in Soil:	No data available.							
-	Results of PBT and vF assessment:	<b>vB</b> No data available.							
2.6 O	Other adverse effects	No data available.							
		Section 13. Disposal	Considerat	ions					
3.1 W	Waste Disposal Metho								
		Section 14. Transp	ort Informat	ion					
14.1 L	LAND TRANSPORT (	JS DOT):							
DOT	T Proper Shipping Na	me: Not dangerous goods.							
DOT	T Hazard Class:								
UN/N	/NA Number:								
14.1 L	LAND TRANSPORT (I	European ADR/RID):							
	R/RID Shipping Name								
	Number:								
	zard Class:								



14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name:

Not dangerous goods.

Additional Transport Information:

# Section 15. Regulatory Information

Transport in accordance with local, state, and federal regulations.

	1	ments and Reauthorization Act of 1986) Lists					
CAS #	Hazardous Com	ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)		
359435-44-2	Glucose pentasu	fate (potassium salt)	No	No	No		
CAS # Hazardous Com		ponents (Chemical Name) Other US EPA or State Lists					
359435-44-2	Glucose pentasu	fate (potassium salt)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No				
Regulatory Info	ormation	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)					
Statement:		No.1272/2008.					
		Section 16. Ot	her Informatio	n			
Revision Date:		11/18/2016					
Additional Info	rmation 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.					