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			ling to Regulation (EC) No. 1907/2006 as a	-				
		Section 1.	Identification of the Substar	nce/Mixture and of	f the Company/U	ndertaking		
.1	Product Co	ode:	28848					
	Product Na	duct Name: GFAP Polyclonal Antibody						
	Synonyms: ALXDRD; Glial Fibrillary Acidic Protein; Intermediate Filament Protein;							
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	y Name:	Cayman Chemical Comp	pany				
			1180 E. Ellsworth Rd.					
			Ann Arbor, MI 48108					
	Informati	address:	www.caymanchem.com	2021	. 1 /70	4\074.0005		
			Cayman Chemical Comp	pany	+1 (73	4)971-3335		
1.4	-	y telephone nu			.4 (00	00 404 0000		
	Emerger	ncy Contact:	CHEMTREC Within USA CHEMTREC Outside US		•)0)424-9300)3)527-3887		
						5)521-5001		
			Section 2. Ha	zards identili	Ication			
2.1			stance or Mixture:					
2.2	Label Elen	nents:						
	GHS Sig	nal Word:	None					
	GHS Haz	zard Phrases:						
	Based or	n evaluation of d	currently available data this sub	stance or mixture is	s not classifiable ad	ccording to GHS.		
	GHS Pre	cautionary Ph	rases:					
	No phras	ses apply.						
	GHS Res	sponse Phrase	s:					
	No phras	ses apply.						
	GHS Sto	orage and Disp	osal Phrases:					
	Please re	efer to Section 7	for Storage and Section 13 for	r Disposal informati				
	Adverse H			i Disposai intornatio	on.			
2.3		Human Health	Material may be irritating to t	·		spiratory tract.		
2.3	Effects an	Human Health nd Symptoms:	Material may be irritating to t May be harmful by inhalatior	the mucous membra	anes and upper res	spiratory tract.		
2.3	Effects an		May be harmful by inhalation May cause eye, skin, or resp	the mucous membra n, ingestion, or skin piratory system irrita	anes and upper res absorption. tion.			
2.3	Effects an		May be harmful by inhalation May cause eye, skin, or resp	the mucous membra n, ingestion, or skin piratory system irrita	anes and upper res absorption. tion.	spiratory tract. t been thoroughly investigated		
2.3	Effects an	nd Symptoms:	May be harmful by inhalation May cause eye, skin, or resp	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p	anes and upper res absorption. tion. properties have no	t been thoroughly investigated		
		nd Symptoms: Sec	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge tion 3. Composition	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information	anes and upper res absorption. tion. properties have no On Ingredie	t been thoroughly investigated		
CAS	#/ H	nd Symptoms: Sec	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge tion 3. Composition ponents (Chemical Name)/	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p	anes and upper res absorption. tion. properties have no	t been thoroughly investigated		
CAS	#/ H CS# R	nd Symptoms: Sec azardous Com	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge tion 3. Composition ponents (Chemical Name)/ ation No.	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information	anes and upper res absorption. tion. properties have no On Ingredie EC No./	t been thoroughly investigated		
CAS RTE	#/ H CS# R	nd Symptoms: Sec lazardous Com EACH Registra	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge tion 3. Composition ponents (Chemical Name)/ ation No.	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information Concentration	anes and upper res absorption. tion. properties have no ON Ingredie EC No./ EC Index No.	t been thoroughly investigated		
CAS RTE NA NA 56	# / H CS # R G 5-81-5 G	Ad Symptoms: Sec azardous Com EACH Registra FAP Polyclonal A	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge tion 3. Composition ponents (Chemical Name)/ ation No.	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information Concentration	anes and upper res absorption. tion. properties have no ON Ingredie EC No./ EC Index No. NA	t been thoroughly investigated		
CAS RTE NA NA 56	# / H CS # R G 5-81-5 G	ad Symptoms: Sec azardous Com EACH Registra FAP Polyclonal A	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge tion 3. Composition ponents (Chemical Name)/ ation No.	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information Concentration 0.05 %	anes and upper res absorption. tion. oroperties have no On Ingredie EC No./ EC Index No. NA NA	t been thoroughly investigated NS GHS Classification No data available.		
CAS RTE NA NA 56 MA80 266	# / H CS # R G G S-81-5 G 050000 01 28-22-8 St	Ad Symptoms: Sec azardous Com EACH Registra FAP Polyclonal A lycerol 1-2119471987-18 odium azide	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge stion 3. Composition ponents (Chemical Name)/ ation No. ntibody	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information Concentration 0.05 %	anes and upper res absorption. tion. oroperties have no On Ingredie EC No./ EC Index No. NA NA 200-289-5 NA 247-852-1	t been thoroughly investigated nts GHS Classification No data available. No GHS classifications appl Acute Tox.(O) 2: H300		
CAS RTE NA NA 56 MA80 266	# / H CS # R G G 3-81-5 G 050000 01 28-22-8 Sr	Ad Symptoms: Sec azardous Com EACH Registra FAP Polyclonal A lycerol 1-2119471987-18	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge stion 3. Composition ponents (Chemical Name)/ ation No. ntibody	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information 0.05 % 50.0 %	anes and upper res absorption. tion. oroperties have no On Ingredie EC No./ EC Index No. NA NA 200-289-5 NA	t been thoroughly investigated nts GHS Classification No data available. No GHS classifications appl Acute Tox.(O) 2: H300 Aquatic (A) 1: H400		
CAS RTE NA NA 56 MA80 266 VY80	# / H CS # R G G 5-81-5 G 050000 01 28-22-8 So 150000 01	Ad Symptoms: Sec azardous Com EACH Registra FAP Polyclonal A lycerol 1-2119471987-18 odium azide 1-2119457019-37	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge stion 3. Composition ponents (Chemical Name)/ ation No. ntibody	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information 0.05 % 50.0 % 0.02 %	anes and upper res absorption. tion. oroperties have no On Ingredie EC No./ EC Index No. NA NA 200-289-5 NA 247-852-1 011-004-00-7	t been thoroughly investigated nts GHS Classification No data available. No GHS classifications appl Acute Tox.(O) 2: H300 Aquatic (A) 1: H400 Aquatic (C) 1: H410		
CAS RTE NA NA 566 VY80 764	# / H CS # R G G 3-81-5 G 050000 07 28-22-8 Si 050000 07 17-14-5 Si	Ad Symptoms: Sec azardous Com EACH Registra FAP Polyclonal A lycerol 1-2119471987-18 odium azide 1-2119457019-37 odium chloride	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge stion 3. Composition ponents (Chemical Name)/ ation No. ntibody	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information 0.05 % 50.0 %	anes and upper res absorption. tion. oroperties have no On Ingredie EC No./ EC Index No. NA 200-289-5 NA 247-852-1 011-004-00-7 231-598-3	t been thoroughly investigated nts GHS Classification No data available. No GHS classifications appl Acute Tox.(O) 2: H300 Aquatic (A) 1: H400		
RTE NA NA 56 MA80 266 VY80 764 VZ47	# / H CS # R G G 3-81-5 G 050000 0' 28-22-8 S 550000 0' 17-14-5 S 25000 0'	Ad Symptoms: Sec azardous Com EACH Registra FAP Polyclonal A lycerol 1-2119471987-18 odium azide 1-2119457019-37	May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge stion 3. Composition ponents (Chemical Name)/ ation No. ntibody -0000	the mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p n/Information 0.05 % 50.0 % 0.02 %	anes and upper res absorption. tion. oroperties have no On Ingredie EC No./ EC Index No. NA NA 200-289-5 NA 247-852-1 011-004-00-7	t been thoroughly investigated nts GHS Classification No data available. No GHS classifications appl Acute Tox.(O) 2: H300 Aquatic (A) 1: H400 Aquatic (C) 1: H410		

Multi-region format



	58-79-4 500000	Sodium phosphate, 01-2119489797-11	Dibasic	0.106 %	231-448-7 NA	No data available.		
	32-18-5 10000	Water na		48.844 -48.944 %	231-791-2 NA	No GHS classifications apply.		
		-	Section 4. Fi	rst Aid Measu	ires	ł		
4.1	Descr	iption of First Aid						
	Measu	ires:						
	In Cas	e of Inhalation:	Remove to fresh air. If not br	eathing, give artificial	respiration or g	give oxygen by trained personnel.		
			Get immediate medical atten	tion.				
	In Case of Skin Contact:		-			15 minutes. Remove contaminated		
			clothing. Get medical attention		-			
	In Cas	e of Eye Contact:			ater for at least	15 minutes. Have eyes examined		
	In Cas	a of Insection.	and tested by medical person		nacious Nover	aive envithing by mouth to on		
	In Cas	e of Ingestion:	-	-		give anything by mouth to an iting unless directed to do so by		
			medical personnel.			ang amess anected to do so by		
			Section 5. Fire	Fighting Mea	asures			
ـــــــــــــــــــــــــــــــــــــ	Suitab	le Extinguishing	Use alcohol-resistant foam,			al spray.		
	Media		Use water spray to cool fire-					
	Unsui	table Extinguishing	A solid water stream may be	inefficient.				
	Media	:						
5.2	Flamn	nable Properties an	dEmits toxic fumes under fire	conditions.				
	Hazar	ds:						
			No data available.					
	Flash	Pt:	No data.					
	Explo	sive Limits:	LEL: No data.	UEL: No da	ita.			
	Autoig	gnition Pt:	No data.					
5.3	Fire Fi	Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or						
			equivalent), and full protectiv	•		and eyes.		
6.1	Brotoc	tive Precautions,	Section 6. Accider					
0.1			Avoid breathing vapors and d As conditions warrant wear			reathing apparatus, or respirator,		
		jency Procedures:				es, and heavy rubber gloves).		
6.2	-	onmental	Take steps to avoid release					
0		utions:			,,			
6.3	Metho	ds and Material Fo	r Contain spill and collect, as	appropriate.				
			gTransfer to a chemical wast		sal in accordance	ce with local regulations.		
	Up:							
			Section 7. Ha	ndling and Sto	orage			
 7.1	Preca	utions To Be Taken	Avoid breathing dust/fume/g					
	in Han		Avoid prolonged or repeated		j -			
7.2		-	Keep container tightly closed	J.				
	in Sto		Store in accordance with info		product insert.			
						Multi-region format		



Section 8. Exposure Controls/Personal Protection

CAS # Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
56-81-5 Glycerol	ACGIH TLV	TLV: 10 mg/m3	
	France VL	TWA: 10 mg/m3	
	OSHA PELs	PEL: 15 (dust); 5 (resp.) mg/m3	
	Britain EH40	TWA: 10 mg/m3 () STEL: ()	
26628-22-8 Sodium azide	ACGIH TLV	CEIL: 0.29 mg/m3	
	Europe	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	Skin Absorption
	France VL	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	
	Britain EH40	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	Skin Absorption

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:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing	g:Lab coat
Respiratory Equipment	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 [X]Liquid []Soli	d
Appearance and Odor:	500 µg of protein A-purified polyclo	nal antibody
pH:	7.2	
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.					
	Coefficie	ent:							
	Autoigni	ition Pt:	No	data.					
	Decomp	osition Temperatu	re: No o	data.					
	Viscosity	y:	No	data.					
9.2	Other Inf	ormation							
	Percent	Volatile:	No	data.					
			Sect	ion 10. Stabil	ity and Rea	activity			
10.1	Reactivit	ty:	No data ava	ailable.					
10.2	Stability	:	Unstable [] Stable [X]					
10.3	Stability	Note(s):	Stable if sto	ored in accordance w	ith information lis	sted on the produ	uct insert.		
	Polymer	ization:	Will occur [] Will not occur	[X]				
10.4	Conditio	ons To Avoid:	No data ava	ailable.					
10.5	Incompa	tibility - Materials	strong base	es					
	To Avoid	d: :	strong oxidi	zing agents					
10.6	Hazardo	us	carbon diox	kide					
	Decomp	osition or	carbon mor	noxide					
	Byprodu	icts:							
			Section	on 11. Toxicol	ogical Info	rmation			
11.1	Informat	ion on	The toxicol	ogical effects of this p	product have not	been thoroughly	studied.		
	Toxicolo	gical Effects:	Sodium azi	de - Toxicity Data: O	ral LD50 (rat): 27	′ mg/kg; Oral TD	LO (woman): 3 n	ng/kg;	
			Intraperiton	eal LDLO (rat): 30 m	g/kg; Subcutane	ous LD50 (rat): 4	l5100 ug/kg;		
		•	Sodium azide - Investigated as an agricultural chemical, drug, mutagen, reproductive effector, a						
	Effects:		tumorigen.						
			-	Registry of Toxic Eff			IECS) data is pre	esented here	
				entry in RTECS for c de RTECS Number:	-	lion.			
Carcir	nogenicity		NTP? No	IARC Monograph		IA Regulated? N	0		
CAS #	¥	Hazardous Comp	onents (Ch	nemical Name)	NTP	IARC	ACGIH	OSHA	
	NA	GFAP Polyclonal A	Antibody		n.a.	n.a.	n.a.	n.a.	
56	-81-5	Glycerol			n.a.	n.a.	n.a.	n.a.	
2662	28-22-8	Sodium azide			n.a.	n.a.	A4	n.a.	
764	7-14-5	Sodium chloride			n.a.	n.a.	n.a.	n.a.	
7778	8-77-0	Potassium phosph	ate, Monob	asic	n.a.	n.a.	n.a.	n.a.	
		Sodium phosphate	, Dibasic		n.a.	n.a.	n.a.	n.a.	
1000	2-18-5	Water			n.a.	n.a.	n.a.	n.a.	



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		Section 12. Ecolo	ogical Inform	ation				
40.4 Taviait			-					
12.1 Toxicit	oxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.							
12.2 Persist	tence and	No data available.	on water may cause					
	lability:							
-	umulative	No data available.						
Potent								
12.4 Mobilit	y in Soil:	No data available.						
	s of PBT and vPvB	No data available.						
assess	sment:							
12.6 Other a	adverse effects:	No data available.						
		Section 13. Dispo	sal Considera	ations				
13.1 Waste	Disposal Method:	Dispose in accordance with loc	al, state, and federa	I regulations.				
		Section 14. Trar	sport Inform	ation				
14.1 LAND	TRANSPORT (US I	DOT):						
DOT Prop	er Shipping Name:	Not dangerous goods.						
DOT Haza	rd Class:							
UN/NA Nu	mber:							
14.1 LAND	TRANSPORT (Euro	opean ADR/RID):						
	Shipping Name:	Not dangerous goods.						
UN Numb								
Hazard Cl								
	ANSPORT (ICAO/I	-						
	A Shipping Name:	Not dangerous goods.	Packing Gr	000				
Hazard Cl			Facking G	oup.				
Additional Tra		Transport in accordance with le	ocal, state, and fede	ral regulations.				
Information:				rai regulationer				
		Section 15. Regu	latory Inform	ation				
EPA SARA (S	Superfund Amendr	nents and Reauthorization Act	•					
CAS #		ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)			
NA	GFAP Polyclonal	· · · ·	No	No	No			
56-81-5	Glycerol		No	No	No			
26628-22-8	Sodium azide		Yes 500 LB	Yes 1000 LB	Yes			
7647-14-5	Sodium chloride		No	No	No			
7778-77-0	Potassium phosphate, Monobasic No No No							
7558-79-4	Sodium phosphate, Dibasic No Yes 5000 LB No							
7732-18-5	Water		No	No	No			
CAS #	Hazardous Com	ponents (Chemical Name)	Other US EPA o	r State Lists	•			
NA	GFAP Polyclonal			No; CWA NPDES: N	lo; TSCA: No; CA			
56-81-5	Glycerol		CAA HAP,ODC: Inventory; CA P	No; CWA NPDES: N ROP.65: No	lo; TSCA: Yes -			
					Multi-region forma			



CHEMICAL					
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		
7778-77-0	7778-77-0 Potassium phosphate, Monobasic		CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No		
7558-79-4 Sodium phosphate, Dibasic			CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No		
7732-18-5	Water		CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No		
Regulatory Info	ormation	This SDS was prepared in acco No.1272/2008.	rdance with 29 CFR 1910.1200 and Regulation (EC)		
		Section 16. Oth	ner Information		
Revision Date:		11/23/2019			
Additional Info This Product:	rmation About	No data available.			
		use. Users should make their o their particular purposes.	wn investigations to determine the suitability of the information for		

Multi-region format