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1. IDENT	IFICATION O	F THE SU	BSTANCE/PRE	EPARATION AN	ND OF THE COM	PANY/UNDERTAKING			
Product identification	n								
Product name			O-CLEAR PLUS						
Synonyms Chamiaal farmula		Standardised liquid enzyme preparation Not applicable							
Chemical formula Relevant identified u	ises and uses								
Recommended use				use in wine maki	ng.				
Details of the suppli	er of the safety	data sheet			0				
Supplier			roup, Inc.						
			Shiloh Rd.						
			or, CA 95492 7-836-6840	Fax 707-836-684;	2				
Email address of the	person	FII. 70	7-030-0040	-ax 101-030-004	0				
responsible for this S	DS	compli	ance@atpgroup.o	com					
Emergency phone n									
Emergency phone nu	mber	Ph. 80				da or call ATPGroup, Inc.			
2.			HAZAR	D IDENTIFICAT	ION				
Classification of the	substance or								
Product definition		Mixture	9						
Classification: According to Regulat	ion (EC) No. 12	72/2008 [C]		atony consitizor o	otogon/1 422/				
The product is classif	ed as hazardou	s. See secti	on 16 for the full t	ext of the H-state	ments declared abo	Ve			
According to the EU	DIR 1999/45 [DF	D] and its a							
See section 16 for the	e full text of the l	R-phrases.			0				
Label elements			•						
Hazard pictograms									
0: 1		_							
Signal word		Dange ⊔224 I		or acthma avma	tome or broathing di	fficultios if inholod			
Hazard statements Precautionary statem	onte	H334-I	viay cause allergy	y or astrina symp	toms or breathing di	inculties il innaled.			
Prevention	onto	P261 -	Avoid breathing of	dust/fume/gas/mis	t/vapours/spray.				
		P285 -	In case of inadec	quate ventilation w	ear respiratory prote	ection.			
Response		P304 -	+ P341 IF INHALI	ED: If breathing is	s difficult, remove v	ictim to fresh air and			
				on comfortable for					
			/physician.	ang respiratory sy	mptoms: Call a POI	SON CENTER OF			
Storage			plicable.						
Disposal			P501 - Dispose of contents/container according to the local regulations.						
Hazardous ingredient	S	Pectin	-lyase.						
Other hazards	and annuals in	The sec							
Other hazards that do classification	not result in	i ne m		nitain and is not c	onsidered as a PBT	UI VEVD SUDSTAIICE.			
		COME							
3.		CONF		UNIVATION OF					
Substance/Mixture	040		Mixture		Clossification				
Ingredient name	CAS Number	%	EINECS Nr	IUB number	Classification acc REG 1272/2008	Classification acc. EU DIR 1999/45			
KCI (E508)	7447-40-7	15-19	231-211-8	-	-	-			
Pectin-lyase	9033-35-6	1-15	232-894-5	4.2.2.10	H334	R42			
Thoro are no ordered	ol ingradicate	ooont which	within the	nt knowledge ef th					
						e concentration applicable, workplace exposure limit and			
hence require reportir			Simont, ale FDT		a been assigned a	moniplace exposure inflit and			
Occupational exposu			ed in Section 8.						
4.			FIRST	AID MEASURE	S				
Description of first ai	d measures:								
Eye contact		Immed	iately rinse with w	ater for at least 1	0 minutes and occas	sionally lift eyelids.			
		Check	for and remove a	ny contact lenses.	. Get medical attenti	on if irritation occurs.			
Inhalation		Remov	e from exposure	into fresh air imme	ediately and rest in a	a position comfortable			
		for brea	athing. If irritation	or allergic respon	se occurs, consult a	doctor.			



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4.	FIRST AID MEASURES (continued)			
Continuation of page 1 Skin contact Ingestion Protection of first-aiders	Wash with soap and water. Should irritation occur, seek medical advice. Rinse mouth and throat thoroughly with water. Work with properly trained first aid personnel. If it is suspected that dust, mist, vapours or fumes are present, wear appropriate mask and/or self-contained breathing apparatus.			
Most important symptoms and effect	s, both acute and delayed			
Potential acute health effects Eye contact Inhalation Skin contact Ingestion <u>Over-exposure signs/symptoms</u> Eye contact Inhalation Skin contact Ingestion	No known significant effects or critical hazards. May cause allergy or asthma symptoms or breathing difficulties if inhaled. No known significant effects or critical hazards. No known significant effects or critical hazards. No specific data. Adverse symptoms may include the following: Wheezing and breathing difficulties; asthma No specific data. No specific data.			
Indication of any immediate medical a Notes to medical doctor Specific treatments	attention and special treatment needed Treat symptomatically. Contact poison treatment or allergen specialist immediately if large quantities have been ingested or inhaled. No specific treatment.			
5.	FIRE-FIGHTING MEASURES			
Extinguishing media Small fire Suitable Not suitable Large fire Suitable Not suitable Special hazards arising from the substance Hazards form the substance or mixture Hazardous combustion products Advice for fire fighters Special protective actions for fire fighters Special protective equipment for fire fighters	In case of a fire or if heated, a pressure increase will occur; the container may burst. In the event of a fire, may produce toxic and/or corrosive decomposition products. Fire water contaminated with this material must be contained and prevented from being discharged into any waterway, sewer or drain. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire fighters (including helmets, protective boots, gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.			
6.	ACCIDENTAL RELEASE MEASURES			
Personal precautions, protective equ For non-emergency personnel	ipment and emergency procedures. Work with properly trained personnel and wear appropriate protective gear. Avoid breathing vapour or mist and evacuate surrounding areas. Do not walk through or spread spilt material and provide adequate ventilation. Avoid contact with the eyes, skin and clothing.			
For emergency responders	See above and in section 8 in case specialised clothing is needed.			
Environmental precautions	After spillage avoid creation of aerosols and dust from dried preparation.			
Method and materials for containmer Small accidental spillage or leak	Mop up with appropriate material. Place in an appropriate container. Clean the area affected with plenty of water.			
Large spill or leak	Avoid the formation of dust or spray. Prevent spillage into the drains, subsoil or confined areas. Contain if necessary. Mop up the product spilled with inert material (e.g. dry sand or dry earth) and place in a chemical waste container.			
Reference to other sections	See section 1 for emergency contact information. See section 8 for information on appropriate protective materials. See section 13 for additional waste treatment information.			



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7. HANDLING AND STORAGE Precautions for safe handling Protective measures Handle according GMP in a food context. Avoid formation of aerosols t from liquid preparation. Provide for good ventilation of the room when handling the product. If possible use in a closed circuit. Wear appropriate protective and working gear. Advice on general occupational Eating, drinking and smoking should be prohibited in an area where this product is handled. Further: apply GMP house rules appropriate for any food processing context. hygiene Conditions for safe storage, including Store in the original container; keep in a dry, clean, well ventilated and cool place. any incompatibilities Store away from incompatible materials indicated in section 10. Properly reclose after opening and prevent leakage. Packaging materials, suitable PE, Polyethylene, high density (PEHD) Specific end uses Recommendations See separate, product and application specific data sheets and supplier info. Industrial sector specific solutions Not available **EXPOSURE CONTROLS/PERSONAL PROTECTION** 8. **Control parameters** Occupational exposure limits No exposure limit known. Product is to be used in well ventilated areas whilst eating, drinking, smoking are to be Recommended procedures including technical and hygienic measures prohibited. Wash hands after handling the product and before eating or smoking and after using the lavatory and at the end of the day. No DNELs/DMELs available DNELs/DMELs PNECs No PNECs available **Exposure controls** Appropriate engineering controls Avoid formation of aerosols and dust from dried preparation. Provide for good ventilation of the room when handling the product. If dust, gas, vapour or mist is generated, use containment measures and local exhaust ventilation or other controls to keep workers exposure of airborne contaminants limited to an absolute minimum. Individual protective measures Respiratory protection Respirator approved for this type of aerosols and dust (mask P3) Skin and body Wear appropriate protective clothing Impermeable gloves, rubber or latex. Hand protection Protecting glasses or eye shield Eve protection Exposure controls for environmental Notify the local authorities in case significant leaks occur that cannot be contained. protection Waste water is to be evacuated normally to purification plants. PHYSICAL AND CHEMICAL PROPERTIES 9 Information concerning the essential physical and chemical properties Appearance and state Whitish to slightly brown liquid. Odour Odour typical for fermentation products. Solubility The product is readily soluble and/or miscible in water. Melting/freezing point, olfactory threshold, initial boiling point and boiling interval, flashpoint, evaporation rate, flammability(solid, gas), steam pressure, steam density, partition coefficient (n- octanol/water), temperature of breakdown, temperature of auto-flammability, viscosity, explosive properties, oxidising properties: Date are as for any protein and are not relevant in this context. Other information No information available STABILITY AND REACTIVITY 10. Reactivity Not relevant. **Chemical stability** The preparation is stable under normal conditions of storage. Possibility of hazardous reactions Under the normal conditions of storage and use, hazardous reaction will not occur. Conditions to avoid No specific data. Incompatible materials No specific data. Hazardous decomposition products No specific data. **TOXICOLOGICAL INFORMATION** 11. Acute toxicity Result Product/ingredient name Species Dose Exposure ZYME-O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary Not available.



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11.

TOXICOLOGICAL INFORMATION (continued)

	TOXICOLOGICAL IN		<u> </u>				
Continuation of page 4							
Potential acute health effects							
Eye contact	No known significant e	ffects or critic	al hazards.				
Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.						
Skin contact		No known significant effects or critical hazards.					
Ingestion	No known significant e						
Acute toxicity	No information availabl	0					
Irritation/Corrosion	No known significant d						
Sensitisation	No specific data available.						
Potential chronic health effects	No specific data avalla	bie.					
Chronic effects	Once sensitised a stro	na alleraic re	action may occur w	hen subsequently exposed	to		
Chionic enects	very low levels.	ing allergic re	action may occur w	men subsequently exposed	10		
Carcinogenicity	Conclusion/Summary: not available.						
Mutagenicity	Conclusion/Summary:						
Teratogenicity	Conclusion/Summary:						
Reproductive toxicity	Conclusion/Summary:						
Specific target organ toxicity	Conclusion/Summary:						
Symptoms related to the physical, c		l characteris	stics				
Eye contact	No specific data.						
Inhalation	Adverse symptoms ma	iy include: wh	eezing and breathin	ng difficulties, asthma.			
Skin contact	No specific data.						
Ingestion	No specific data.						
General	Once sensitised, a sev	ere allergic re	eaction may occur v	when subsequently exposed	to		
	very low levels.	5	-	. , ,			
Carcinogenicity	No known significant e						
Mutagenicity	No known significant e						
Teratogenicity	No known significant e						
Developmental effects	No known significant e						
Fertility effects	No known significant e	ffects or critic	al hazards.				
12.	ECOLOGICA	L INFORM	ATION				
Toxicity							
Toxicity		Chanica		Deput			
Product/ingredient name		Species	Exposure	Result			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID		Species -	Exposure -	Result			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase		Species -	Exposure -	Result -			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available		Species -	Exposure -	Result -			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability		-	-	-			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available		-	Exposure - Photolysis	Result - Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name		- Aquatic half life	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID		-	-	-			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase		- Aquatic half life	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available		- Aquatic half life -	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential	Conclusion/Summary:	- Aquatic half life -	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil	·	- Aquatic half life -	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient	Not available.	- Aquatic half life -	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility	·	- Aquatic half life -	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment	Not available. Not available.	- Aquatic half life -	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT	Not available. Not available. Not applicable.	- Aquatic half life -	- Photolysis	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB	Not available. Not available. Not applicable. Not applicable.	- Aquatic half life - not available	- Photolysis -	- Biodegradability			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects	Not available. Not available. Not applicable. Not applicable. No known significant e	Aquatic half life - not available	- Photolysis 	- Biodegradability Readily			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belie	Aquatic half life - not available ffects or critic	- Photolysis 	- Biodegradability Readily environment with respect to			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is beli mobility, persistence a	Aquatic half life - not available ffects or critic eved not to b	- Photolysis 	- Biodegradability Readily			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is beli mobility, persistence an other data relating to e	Aquatic half life - not available ffects or critic eved not to b nd degradabi co-toxicity.	Photolysis - . cal hazards. e dangerous to the lity, bio-accumulativ	- Biodegradability Readily environment with respect to			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is beli mobility, persistence a	Aquatic half life - not available ffects or critic eved not to b nd degradabi co-toxicity.	Photolysis - . cal hazards. e dangerous to the lity, bio-accumulativ	- Biodegradability Readily environment with respect to			
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is beli mobility, persistence an other data relating to e	Aquatic half life - not available ffects or critic eved not to b nd degradabi co-toxicity.	Photolysis Photolysis . cal hazards. e dangerous to the lity, bio-accumulativ ATIONS	Biodegradability Readily environment with respect to re potential, aquatic toxicity	and		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13.	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is beli mobility, persistence an other data relating to e	Aquatic half life - not available ffects or critic eved not to b nd degradabi co-toxicity.	Photolysis Photolysis - al hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b	Biodegradability Biodegradability Readily environment with respect to re potential, aquatic toxicity y flushing with water into ar	and		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13.	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is beliv mobility, persistence an other data relating to e DISPOSAL C Dispose of surplus or n	Aquatic half life - not available ffects or critic eved not to b hd degradabi co-toxicity.	Photolysis Photolysis - al hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b with local legal req	Biodegradability Biodegradability Readily environment with respect to re potential, aquatic toxicity y flushing with water into ar uirements.	and		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13.	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belie mobility, persistence a other data relating to e DISPOSAL C Dispose of surplus or n approved sewer or othe Empty containers or IB	Aquatic half life - not available ffects or critic eved not to b hd degradabi co-toxicity. CONSIDER/	Photolysis Photolysis - al hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b with local legal req insed and find altern	Biodegradability Biodegradability Readily Readily vy flushing with water into ar uirements. native uses.	and		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13. Waste treatment methods	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belie mobility, persistence a other data relating to e DISPOSAL C Dispose of surplus or n approved sewer or othe Empty containers or IB	Aquatic half life - not available ffects or critic eved not to b hd degradabi co-toxicity. CONSIDER/	Photolysis Photolysis - al hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b with local legal req insed and find altern	Biodegradability Biodegradability Readily environment with respect to re potential, aquatic toxicity y flushing with water into ar uirements.	and		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13. Waste treatment methods Hazardous waste	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belia mobility, persistence at other data relating to e DISPOSAL C Dispose of surplus or r approved sewer or othe Empty containers or IB The classification of the for hazardous waste.	Aquatic half life - not available ffects or critic eved not to b hd degradabi co-toxicity. CONSIDER/ toon-recyclable erwise in line C's may be r e product and	Photolysis Photolysis - al hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b with local legal req insed and find altern d/or the packaging n	Piodegradability Biodegradability Readily Readily ventionment with respect to ve potential, aquatic toxicity vy flushing with water into ar uirements. native uses. naterial may meet the criteri	and		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13. Waste treatment methods Hazardous waste Packaging material	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belia mobility, persistence at other data relating to e DISPOSAL C Dispose of surplus or r approved sewer or othe Empty containers or IB The classification of the for hazardous waste. P501 - Dispose of cont	Aquatic half life - not available ffects or critic eved not to b hd degradabi co-toxicity. CONSIDER/ tervise in line C's may be r e product and ents/containe	Photolysis Photolysis Photolysis - al hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b with local legal req insed and find altern d/or the packaging n er according to the l	Biodegradability Biodegradability Readily Readily ventionment with respect to ve potential, aquatic toxicity vy flushing with water into ar uirements. native uses. naterial may meet the criteri ocal regulations.	and		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13. Waste treatment methods Hazardous waste	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belia mobility, persistence au other data relating to e DISPOSAL C Dispose of surplus or r approved sewer or othe Empty containers or IB The classification of the for hazardous waste. P501 - Dispose of cont This material and its co	Aquatic half life - not available ffects or critic eved not to b nd degradabi co-toxicity. CONSIDER/ terwise in line C's may be r e product and ents/containe	Photolysis Photolysis - Photolysis - and angerous to the ity, bio-accumulativ ATIONS e residual product b with local legal req insed and find altern //or the packaging r er according to the l be disposed of in a	Biodegradability Biodegradability Readily Readily environment with respect to re potential, aquatic toxicity ry flushing with water into ar uirements. native uses. naterial may meet the criteri ocal regulations. a safe way. Care should be	and n a		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13. Waste treatment methods Hazardous waste Packaging material	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belia mobility, persistence ar other data relating to e DISPOSAL C Dispose of surplus or n approved sewer or othe Empty containers or IB The classification of the for hazardous waste. P501 - Dispose of cont This material and its co taken when handling e	Aquatic half life - not available ffects or critic eved not to b nd degradabi co-toxicity. CONSIDER/ icon-recyclable crivice in line C's may be r e product and ents/containe ontainer must mptied conta	Photolysis Photolysis - Photolysis - ad hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b with local legal req insed and find altern //or the packaging n er according to the l be disposed of in a iners that have not	Biodegradability Biodegradability Readily Readily environment with respect to re potential, aquatic toxicity y flushing with water into ar uirements. native uses. naterial may meet the criteri ocal regulations. a safe way. Care should be been cleaned or rinsed out.	and n a		
Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Persistence and degradability Product/ingredient name ZYME -O-CLEAR PLUS LIQUID / pectin lyase Conclusion/Summary: not available Bio accumulative potential Mobility in soil Soil/water partition coefficient Mobility Results of PBT / vPvB assessment PBT vPvB Other adverse effects Remarks 13. Waste treatment methods Hazardous waste Packaging material	Not available. Not available. Not applicable. Not applicable. No known significant e The preparation is belia mobility, persistence au other data relating to e DISPOSAL C Dispose of surplus or r approved sewer or othe Empty containers or IB The classification of the for hazardous waste. P501 - Dispose of cont This material and its co taken when handling e Empty containers may	Aquatic half life - not available ffects or critic eved not to b nd degradabi co-toxicity. CONSIDER/ terwise in line C's may be r e product and ents/containe ontainer must mptied conta retain some	Photolysis Photolysis - Photolysis - al hazards. e dangerous to the lity, bio-accumulativ ATIONS e residual product b with local legal req insed and find altern //or the packaging r er according to the I be disposed of in a iners that have not product residues. A	Biodegradability Biodegradability Readily Readily environment with respect to re potential, aquatic toxicity ry flushing with water into ar uirements. native uses. naterial may meet the criteri ocal regulations. a safe way. Care should be	and n a		



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TRANSPORT INFORMATION 14. International transport regulations: UN proper Transport Environmental Additional **UN** number Packing group hazard class information shipping name hazards ADR/RID Not regulated No ADN Not regulated No ----IMDG Not regulated No IATA Not regulated No Special instructions for the user Transport at the users' premises: ensure transport in closed and upright drums or cartons by qualified and trained personnel aware of what to do in the event of spillage. Transport in bulk according Annex II of MARPOL 73/78 and the IBC code Not available **REGULATORY INFORMATION** 15. Safety, health and environmental regulations/legislation specific for the substance or mixture: EU Regulation 1907/2006 (REACH) None of the components are listed. Annex XIV – List of substances subject to authorisation Substances of very high concern None of the components are listed. Annex XVII Restrictions on the Not applicable. manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Chemical safety assessment No chemical safety assessment was needed and/or has been carried out. 16. **OTHER INFORMATION** Procedure used to derive the classification according to EU Regulation 1272/2008 [CLP/GLS] Justification Product/ingredient name Classification **ZYME -O-CLEAR PLUS** Resp. Sens. 1, H334 Calculation method LIQUID / pectin lyase Full text of abbreviated H statements H334: May cause allergy of asthma symptoms or breathing difficulties if inhaled. Full text of classifications [CLP/GLS] Resp. Sens. 1, H334 RESPIRATORY SENSITIZATION - Category 1. Full text of abbreviated R phrases R42 - May cause sensitisation by inhalation. Full text of classifications Not applicable. Alterations compared to previous version Alterations to the previous version are marked with an *. Material for study and training Enzyme products need handled with care by skilled personnel only. Please consult the 'AMFEP Guide to the Safe handling of Enzymes' (www.amfep.org) for further information. As being linked to AMFEP, the mfg. plant has adopted a strict safety policy and recommends enzyme processing organisations to take note of the information presented by AMFEP, of which this MSDS only is a formal summary. Notice to the reader The information contained in this Material Safety Data Sheet, as of the issue date, is believed to be true and correct. However, the accuracy or completeness of this information and any recommendations or suggestions are made without warranty or guarantee. Since the conditions of use are beyond the control of our company, it is the responsibility of the user to determine the conditions of safe and appropriate use of this preparation. The information in this sheet does not represent analytical specifications, for which please refer to our technical data sheets. The format of this SDS references the EC Regulation 1907/2006 as amended and ISO standard ISO 11014-1:1994 (E) and is recommended by the Association of Manufacturers and Formulators of Enzyme Products (AMFEP). History Date first issue : 08/07/2015 Last review date : See header. Version : SDS-CLP/GHS-001/15