

SAFETY DATA SHEET

ISH Pepsin Kit, Part Number G9411A

Section 1. Identification

Product identifier : ISH Pepsin Kit, Part Number G9411A
Part no. (chemical kit) : G9411A
Part no. : Pepsin 5190-7748
 Pepsin Diluent (10X) 5190-7749

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Analytical reagent.
 Pepsin 48 ml (2 mg/ml)
 Pepsin Diluent (10X) 48 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Pepsin
 H226 FLAMMABLE LIQUIDS - Category 3
 H317 SKIN SENSITISATION - Category 1
 H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

Pepsin Diluent (10X)
 H225 FLAMMABLE LIQUIDS - Category 2
 H315 SKIN CORROSION/IRRITATION - Category 2
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
 H317 SKIN SENSITISATION - Category 1
 H336 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
 H400 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
 H410 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

GHS label elements

Hazard pictograms : Pepsin



Pepsin Diluent (10X)



Signal word : Pepsin WARNING
 Pepsin Diluent (10X) DANGER

Section 2. Hazard(s) identification

Hazard statements	: Pepsin Pepsin Diluent (10X)	H226 - Flammable liquid and vapour. H317 - May cause an allergic skin reaction. H411 - Toxic to aquatic life with long lasting effects. H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness. H410 - Very toxic to aquatic life with long lasting effects.
 Precautionary statements		
Prevention	: Pepsin Pepsin Diluent (10X)	P280 - Wear protective gloves. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment.
Response	: Pepsin Pepsin Diluent (10X)	P391 - Collect spillage. P391 - Collect spillage.
Storage	: Pepsin Pepsin Diluent (10X)	Not applicable. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: Pepsin Pepsin Diluent (10X)	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
 Supplemental label elements		
Additional warning phrases	: Pepsin Pepsin Diluent (10X)	Not applicable. Not applicable.
Other hazards which do not result in classification	: Pepsin Pepsin Diluent (10X)	None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	: Pepsin Pepsin Diluent (10X)	Mixture Mixture
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CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Pepsin		
Propan-2-ol	≤10	67-63-0
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	≤0.1	55965-84-9
Pepsin Diluent (10X)		
Propan-2-ol	≥60 - ≤75	67-63-0
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	<1	55965-84-9

Section 3. Composition and ingredient information

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Pepsin	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	Pepsin Diluent (10X)	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	: Pepsin	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Pepsin Diluent (10X)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Pepsin	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Pepsin Diluent (10X)	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes

Section 4. First aid measures

Ingestion

: Pepsin

thoroughly before reuse.

Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Pepsin Diluent (10X)

Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: Pepsin
Pepsin Diluent (10X)

No known significant effects or critical hazards. Causes serious eye irritation.

Inhalation

: Pepsin
Pepsin Diluent (10X)

No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact

: Pepsin
Pepsin Diluent (10X)

May cause an allergic skin reaction. Causes skin irritation. May cause an allergic skin reaction.

Ingestion

: Pepsin
Pepsin Diluent (10X)

No known significant effects or critical hazards. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact

: Pepsin
Pepsin Diluent (10X)

No specific data. Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation

: Pepsin
Pepsin Diluent (10X)

No specific data. Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Section 4. First aid measures

Skin contact	: Pepsin	Adverse symptoms may include the following: irritation redness
	Pepsin Diluent (10X)	Adverse symptoms may include the following: irritation redness
Ingestion	: Pepsin	No specific data.
	Pepsin Diluent (10X)	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Pepsin	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Pepsin Diluent (10X)	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: Pepsin	No specific treatment.
	Pepsin Diluent (10X)	No specific treatment.
Protection of first-aiders	: Pepsin	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Pepsin Diluent (10X)	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: Pepsin	Use dry chemical, CO ₂ , water spray (fog) or foam.
	Pepsin Diluent (10X)	Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Pepsin	Do not use water jet.
	Pepsin Diluent (10X)	Do not use water jet.

Specific hazards arising from the chemical	: Pepsin	Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	Pepsin Diluent (10X)	Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or

Section 5. Firefighting measures

Hazardous thermal decomposition products	: Pepsin Pepsin Diluent (10X)	drain. Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
Special protective actions for fire-fighters	: Pepsin Pepsin Diluent (10X)	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Pepsin Pepsin Diluent (10X)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hazchem code	: Pepsin Pepsin Diluent (10X)	3Y 3Y

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Pepsin Pepsin Diluent (10X)	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
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Section 6. Accidental release measures

For emergency responders : Pepsin

Pepsin Diluent (10X)

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Pepsin

Pepsin Diluent (10X)

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and material for containment and cleaning up

Methods for cleaning up : Pepsin

Pepsin Diluent (10X)

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor.
Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Pepsin

Pepsin Diluent (10X)

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
Put on appropriate personal protective equipment

Section 7. Handling and storage

(see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Pepsin

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Pepsin Diluent (10X)

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Pepsin

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from alkalis. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Pepsin Diluent (10X)

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from alkalis. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
Pepsin Propan-2-ol	Safe Work Australia (Australia, 12/2019). STEL: 1230 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 983 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.
Pepsin Diluent (10X) Propan-2-ol	Safe Work Australia (Australia, 12/2019). STEL: 1230 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 983 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.

[Biological exposure indices](#)

No exposure indices known.

[Appropriate engineering controls](#)

- Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

[Environmental exposure controls](#)

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

[Individual protection measures](#)

[Hygiene measures](#)

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

[Eye/face protection](#)

- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

[Skin protection](#)

[Hand protection](#)

- Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

[Body protection](#)

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

[Other skin protection](#)

- Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls and personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Pepsin	Liquid.
	Pepsin Diluent (10X)	Liquid.
Colour	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Odour	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Odour threshold	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
pH	: Pepsin	2
	Pepsin Diluent (10X)	2
Melting point/freezing point	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Boiling point, initial boiling point, and boiling range	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Flash point	: Pepsin	Closed cup: 37.8 to 61°C (100 to 141.8°F)
	Pepsin Diluent (10X)	Closed cup: -18 to 23°C (-0.4 to 73.4°F)
Evaporation rate	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Flammability	: Pepsin	Not applicable.
	Pepsin Diluent (10X)	Not applicable.
Lower and upper explosion limit/flammability limit	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.

Vapour pressure

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Pepsin						
Propan-2-ol	33	4.4		177	23.6	
water	23.8	3.2		92.258	12.3	
Pepsin Diluent (10X)						
Propan-2-ol	33	4.4		177	23.6	
water	23.8	3.2		92.258	12.3	

Relative vapour density : Pepsin Not available.
Pepsin Diluent (10X) Not available.

Relative density : Pepsin Not available.
Pepsin Diluent (10X) Not available.

Section 9. Physical and chemical properties and safety characteristics

Solubility(ies)	Media	Result		
	Pepsin water	Soluble		
	Pepsin Diluent (10X) water	Soluble		
Partition coefficient: n-octanol/water	Pepsin	Not applicable.		
	Pepsin Diluent (10X)	Not applicable.		
Auto-ignition temperature	Ingredient name	°C	°F	Method
	Pepsin			
	Propan-2-ol	456	852.8	
	Pepsin Diluent (10X)			
	Propan-2-ol	456	852.8	
Decomposition temperature	Pepsin	Not available.		
	Pepsin Diluent (10X)	Not available.		
Viscosity	Pepsin	Not available.		
	Pepsin Diluent (10X)	Not available.		
Particle characteristics				
Median particle size	Pepsin	Not applicable.		
	Pepsin Diluent (10X)	Not applicable.		

Section 10. Stability and reactivity

Reactivity	Pepsin	No specific test data related to reactivity available for this product or its ingredients.
	Pepsin Diluent (10X)	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	Pepsin	The product is stable.
	Pepsin Diluent (10X)	The product is stable.
Possibility of hazardous reactions	Pepsin	Under normal conditions of storage and use, hazardous reactions will not occur.
	Pepsin Diluent (10X)	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Pepsin	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
	Pepsin Diluent (10X)	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	Pepsin	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis oxidising materials
	Pepsin Diluent (10X)	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis

Section 10. Stability and reactivity

oxidising materials

Hazardous decomposition products : Pepsin

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Pepsin Diluent (10X)

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Pepsin Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
	LC50 Inhalation Vapour	Rat	0.33 mg/l	4 hours
Pepsin Diluent (10X) Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	LD50 Dermal	Rabbit	87.12 mg/kg	-
	LD50 Oral	Rat	53 mg/kg	-
	LC50 Inhalation Vapour	Rat	0.33 mg/l	4 hours
Pepsin Diluent (10X) Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	LD50 Dermal	Rabbit	87.12 mg/kg	-
	LD50 Oral	Rat	53 mg/kg	-
	LC50 Inhalation Vapour	Rat	0.33 mg/l	4 hours

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Pepsin Propan-2-ol	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Pepsin Diluent (10X) Propan-2-ol	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

Sensitisation

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Section 11. Toxicological information

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Pepsin Propan-2-ol	Category 3	-	Narcotic effects
Pepsin Diluent (10X) Propan-2-ol	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Pepsin
Pepsin Diluent (10X)

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Pepsin
Pepsin Diluent (10X)

No known significant effects or critical hazards.
Causes serious eye irritation.

Inhalation : Pepsin
Pepsin Diluent (10X)

No known significant effects or critical hazards.
Can cause central nervous system (CNS) depression.
May cause drowsiness or dizziness.

Skin contact : Pepsin
Pepsin Diluent (10X)

May cause an allergic skin reaction.
Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Pepsin
Pepsin Diluent (10X)

No known significant effects or critical hazards.
Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Pepsin
Pepsin Diluent (10X)

No specific data.
Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Pepsin
Pepsin Diluent (10X)

No specific data.
Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Pepsin
Pepsin Diluent (10X)

Adverse symptoms may include the following:
irritation
redness
Adverse symptoms may include the following:
irritation
redness

Ingestion : Pepsin
Pepsin Diluent (10X)

No specific data.
No specific data.

Section 11. Toxicological information

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: Pepsin Pepsin Diluent (10X)	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: Pepsin Pepsin Diluent (10X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Pepsin Pepsin Diluent (10X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: Pepsin Pepsin Diluent (10X)	No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Pepsin Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	5000 53	12800 87.12	N/A N/A	72.2 0.5	N/A N/A
Pepsin Diluent (10X) Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	5000 53	12800 87.12	N/A N/A	72.2 0.5	N/A N/A

Other information	: Pepsin Pepsin Diluent (10X)	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking. Not available.
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Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Pepsin Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Acute EC50 7550 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
	Acute LC50 0.16 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 0.19 mg/l Fresh water Chronic NOEC >0.0464 mg/l Fresh water	Fish Fish	96 hours 96 hours
Pepsin Diluent (10X) Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Acute EC50 7550 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
	Acute LC50 0.16 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 0.19 mg/l Fresh water Chronic NOEC >0.0464 mg/l Fresh water	Fish Fish	96 hours 96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Pepsin reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	OECD 301B Ready Biodegradability - CO2 Evolution Test	62 % - Readily - 28 days	-	-
	OECD 301B Ready Biodegradability - CO2 Evolution Test	62 % - Readily - 28 days	-	-
Pepsin Diluent (10X) reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	OECD 301B Ready Biodegradability - CO2 Evolution Test	62 % - Readily - 28 days	-	-
	OECD 301B Ready Biodegradability - CO2 Evolution Test	62 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Pepsin Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	-	-	Readily Readily
	-	-	Readily
Pepsin Diluent (10X) Propan-2-ol	-	-	Readily

Section 12. Ecological information

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	-	-	Readily
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Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Pepsin Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	0.05 0.326	- -	low low
Pepsin Diluent (10X) Propan-2-ol reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	0.05 0.326	- -	low low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.


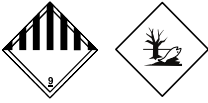

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADG	IMDG	IATA
UN number	UN3316	UN3316	UN3316
UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit

Section 14. Transport information

Transport hazard class(es)	9 	9 	9 
Packing group	II	II	II
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

- ADG** : **Hazchem code** 2Z
Special provisions 251, 340
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-A, _S-P_
Special provisions 251, 340
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
Special provisions A44, A163

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : Not determined.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory:** All components are listed or exempted.

Section 15. Regulatory information

Japan	: Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision	: 23/03/2023
Date of previous issue	: 24/02/2020
Version	: 5

Key to abbreviations

: ADG = Australian Dangerous Goods
: ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
: ATE = Acute Toxicity Estimate
: BCF = Bioconcentration Factor
: GHS = Globally Harmonized System of Classification and Labelling of Chemicals
: IATA = International Air Transport Association
: IBC = Intermediate Bulk Container
: IMDG = International Maritime Dangerous Goods
: LogPow = logarithm of the octanol/water partition coefficient
: MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
: N/A = Not available
: SUSMP = Standard Uniform Schedule of Medicine and Poisons
: UN = United Nations

Procedure used to derive the classification

Classification	Justification
Pepsin FLAMMABLE LIQUIDS - Category 3 SKIN SENSITISATION - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2	On basis of test data Calculation method Calculation method
Pepsin Diluent (10X) FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1	On basis of test data Expert judgment Expert judgment Calculation method Calculation method Calculation method Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

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