

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

Material 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

Pepsin Diluent (10X)
 H225 FLAMMABLE LIQUIDS - Category 2
 H315 SKIN CORROSION/IRRITATION - Category 2
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
 H336 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
 H402 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3
 H412 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

 Pepsin Diluent (10X) Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
 Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
 Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%

Pepsin Diluent (10X) Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.9%

GHS label elements

Hazard pictograms

:  Pepsin



Pepsin Diluent (10X)



Section 2. Hazard(s) identification

Signal word	: Pepsin Pepsin Diluent (10X)	WARNING DANGER
Hazard statements	: Pepsin Pepsin Diluent (10X)	H226 - Flammable liquid and vapour. H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H336 - May cause drowsiness or dizziness. H412 - Harmful to aquatic life with long lasting effects.
<u>Precautionary statements</u>		
Prevention	: Pepsin Pepsin Diluent (10X)	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. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P233 - Keep container tightly closed. 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. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P233 - Keep container tightly closed. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. P264 - Wash hands thoroughly after handling.
Response	: Pepsin Pepsin Diluent (10X)	P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P302 + P352 + P362 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
Storage	: Pepsin Pepsin Diluent (10X)	P403 - Store in a well-ventilated place. P235 - Keep cool. P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.

Section 2. Hazard(s) identification

Disposal : Pepsin P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Pepsin Diluent (10X) P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

Additional warning phrases : Pepsin Not applicable.
Pepsin Diluent (10X) Not applicable.

Other hazards which do not result in classification : Pepsin None known.
Pepsin Diluent (10X) None known.

Section 3. Composition and ingredient information

Substance/mixture : Pepsin Mixture
Pepsin Diluent (10X) Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Pepsin Propan-2-ol	≤10	67-63-0
Pepsin Diluent (10X) Propan-2-ol	≥60 - ≤75	67-63-0
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤10	1185-53-1
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

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

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

Section 4. First aid measures

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
Pepsin Diluent (10X)

Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Pepsin
Pepsin Diluent (10X)

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Section 4. First aid measures

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)	No known significant effects or critical hazards. Causes skin irritation.
Ingestion	: Pepsin Pepsin Diluent (10X)	No known significant effects or critical hazards. Can cause central nervous system (CNS) depression.
<u>Over-exposure signs/symptoms</u>		
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)	No specific data. Adverse symptoms may include the following: irritation redness
Ingestion	: Pepsin Pepsin Diluent (10X)	No specific data. No specific data.

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

Notes to physician	: Pepsin Pepsin Diluent (10X)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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 Pepsin Diluent (10X)	No specific treatment. No specific treatment.
Protection of first-aiders	: Pepsin Pepsin Diluent (10X)	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. 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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

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

Section 5. Firefighting measures

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.
	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 harmful 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.
Hazardous thermal decomposition products	: Pepsin	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Pepsin Diluent (10X)	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
Special protective actions for fire-fighters	: Pepsin	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.
	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.
Special protective equipment for fire-fighters	: Pepsin	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	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.
Hazchem code	: Pepsin	•2YE
	Pepsin Diluent (10X)	•2YE

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Pepsin	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.
	Pepsin Diluent (10X)	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected

Section 6. Accidental release measures

For emergency responders : Pepsin

Pepsin Diluent (10X)

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.

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".
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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).

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.

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

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. 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.

Section 7. Handling and storage

Pepsin Diluent (10X)

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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 oxidizing 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 oxidizing 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, 1/2014). 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, 1/2014). STEL: 1230 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 983 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.

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. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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. 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

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	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Boiling point	: 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 (solid, gas)	: Pepsin	Not applicable.
	Pepsin Diluent (10X)	Not applicable.
Lower and upper explosive (flammable) limits	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Vapour pressure	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Vapour density	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Relative density	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Solubility	: Pepsin	Soluble in the following materials: cold water and hot water.
	Pepsin Diluent (10X)	Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Auto-ignition temperature	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Decomposition temperature	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.
Viscosity	: Pepsin	Not available.
	Pepsin Diluent (10X)	Not available.

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.

Section 10. Stability and reactivity

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 oxidizing 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 oxidizing 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	LC50 Inhalation Vapour LD50 Dermal LD50 Oral	Rat Rabbit Rat	66100 mg/m ³ 12800 mg/kg 5000 mg/kg	4 hours - -
Pepsin Diluent (10X) Propan-2-ol	LC50 Inhalation Vapour LD50 Dermal LD50 Oral LD50 Oral	Rat Rabbit Rat Rat	66100 mg/m ³ 12800 mg/kg 5000 mg/kg 53 mg/kg	4 hours - - -
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)				

Irritation/Corrosion

Section 11. Toxicological information

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

Sensitisation

Not available.

Conclusion/Summary

Respiratory : **Pepsin**: May cause sensitisation by inhalation.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

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	Not applicable.	Narcotic effects
Pepsin Diluent (10X) Propan-2-ol 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation

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

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)

No known significant effects or critical hazards.
Causes skin irritation.

Section 11. Toxicological information

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) No specific data.
Adverse symptoms may include the following:
irritation
redness

Ingestion : Pepsin
Pepsin Diluent (10X) No specific data.
No specific data.

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) No known significant effects or critical hazards.
No known significant effects or critical hazards.

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.

Teratogenicity : Pepsin
Pepsin Diluent (10X) No known significant effects or critical hazards.
No known significant effects or critical hazards.

Developmental effects : Pepsin
Pepsin Diluent (10X) No known significant effects or critical hazards.
No known significant effects or critical hazards.

Fertility effects : 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

Not available.

Section 11. Toxicological information

Other information : Pepsin

Pepsin Diluent (10X)

Adverse symptoms may include the following:
Repeated exposure may cause skin dryness or cracking. May cause sensitisation by inhalation.
Adverse symptoms may include the following:
Repeated exposure may cause skin dryness or cracking.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Pepsin Propan-2-ol	Acute EC50 10100 mg/l Fresh water Acute LC50 1400000 µg/l Marine water Acute LC50 4200 mg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Crangon crangon Fish - Rasbora heteromorpha	48 hours 48 hours 96 hours
Pepsin Diluent (10X) Propan-2-ol	Acute EC50 10100 mg/l Fresh water Acute LC50 1400000 µg/l Marine water Acute LC50 4200 mg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Crangon crangon Fish - Rasbora heteromorpha	48 hours 48 hours 96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Pepsin Propan-2-ol	301E Ready Biodegradability - Modified OECD Screening Test	95 % - 21 days	-	-
Pepsin Diluent (10X) Propan-2-ol	301E Ready Biodegradability - Modified OECD Screening Test	95 % - 21 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Pepsin Propan-2-ol	-	-	Readily
Pepsin Diluent (10X) Propan-2-ol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Pepsin Propan-2-ol	0.05	-	low
Pepsin Diluent (10X) Propan-2-ol	0.05	-	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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. 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
Transport hazard class(es)	9 	9 	9 
Packing group	II	II	II
Environmental hazards	No.	No.	No.

Additional information

ADG : **Hazchem code** 2Z
Special provisions 251, 340

IMDG : **Emergency schedules** F-A, _S-P_
Special provisions 251, 340

IATA : **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 Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine 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 (Annexes A, B, C, E)

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.
Europe	: Not determined.
Japan	: Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: 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	: <input checked="" type="checkbox"/> All components are listed or exempted.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 07/03/2018

Date of previous issue : 30/08/2016

Version : 3

Key to abbreviations

ADG = Australian Dangerous Goods
 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)
 NOHSC = National Occupational Health and Safety Commission

Section 16. Any other relevant information

SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
Pepsin Flam. Liq. 3, H226	On basis of test data
Pepsin Diluent (10X) Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Aquatic Acute 3, H402 Aquatic Chronic 3, H412	On basis of test data Expert judgment Expert judgment Calculation method Calculation method Calculation method

References : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

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