Section 1 Chemical Product and Company Identification

HOME SCIENCE TOOLS
665 Carbon Street
Billings, MT 59102
800-860-6272
www.homesciencetools.com

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
1 703-741-5500 (from anywhere in the world).
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**BENEDICT'S QUALITATIVE SOLUTION**
Synonyms	Benedict's Sugar Test Reagent ; Benedict's Solution ; Benedict's Qualitative Reagent

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07 / GHS09
Target organs: Liver, kidneys.

GHS Classification:
Skin irritation (Category 3)
Eye irritation (Category 2B)
Acute toxicity, oral (Category 4)
Acute toxicity, dermal (Category 5)
Acute toxicity, inhalation (Category 4)
Aquatic toxicity (Category 1)

GHS Label information: **Hazard statement(s):**
H302: Harmful if swallowed.
H313: May be harmful in contact with skin.
H316: Causes mild skin irritation.
H320: Causes eye irritation.
H332: Harmful if inhaled.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):
P261: Avoid breathing mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P391: Collect spillage.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	77.9%	231-791-2
Sodium citrate	68-04-2	13.7%	200-675-3
Sodium carbonate	497-19-8	6.9%	207-838-8
Cupric sulfate, pentahydrate	7758-99-8	1.5%	231-847-6 (anhydrous)

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, spray or mist. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Cupric sulfate	TWA: 0.2 mg/m^3 copper fume as Cu	None established.	None established.

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, pale blue liquid.
Odor: No odor.
Odor threshold: N/A
pH: N/A
Melting / Freezing point: ~ 0°C (~ 32°F) [water]
Boiling point: ~ 100°C (212°F) [water]
Flash point: Not flammable.

Evaporation rate (= 1): < 1
Flammability (solid/gas): N/A
Explosion limits: Upper: N/A **Lower:** N/A
Vapor pressure (mm Hg): 14 [water]
Vapor density (Air = 1): 0.7 [water]
Relative density (Specific gravity): 1.0 [water]
Solubility(ies): Complete.

Partition coefficient: (n-octanol / water): N/A
Auto-ignition temperature: N/A
Decomposition temperature: N/A
Viscosity: N/A
Molecular formula: Mixture.
Molecular weight: Mixture.

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatibilities with other materials: Acids and strong oxidizers.

Hazardous decomposition products: Carbon oxides.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 300 mg/kg (Copper sulfate) - Dermal-rat LD50: >1000 mg/kg (Copper sulfate) - Inhalation-rat LC50: 2.3 mg/l 2 hour (Sodium carbonate)
Skin corrosion/irritation: Slightly irritating
Serious eye damage/irritation: Slightly irritating
Respiratory or skin sensitization: Not a sensitizer
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: May be harmful if inhaled.
Ingestion: May be harmful if swallowed.
Skin: Contact may cause irritation.
Eyes: Contact may cause irritation.
Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: Not available for this mixture.

Section 12 Ecological Information

Toxicity to fish: Salmo gairdneri (Fish, estuary, fresh water) LC50: < .75-.84 mg/l
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
Exceptions: Not applicable
2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
All components listed with TSCA.						This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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For laboratory and industrial use only.
Not for drug, food or household use.

Product	**CALCIUM HYDROXIDE**
Synonyms	Hydrated Lime / Slaked Lime / Caustic Lime / Calcium Hydrate

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS05
Target organs: Eyes, Skin, Respiratory system

GHS Classification:
Skin corrosion (Category 1B)
Eye damage (Category 1)

GHS Label information: **Hazard statement:**
H314: Causes severe skin burns and eye damage.

Precautionary statement:
P260: Do not breathe dust.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER or doctor.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Calcium hydroxide	1305-62-0	>98%	215-137-3

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SEVERE BURNS AND EYE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Calcium hydroxide	TWA: 5 mg/m^3	TWA: 5 mg/m^3 Respirable fraction	TWA: 5 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White to yellow powder.
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: as CaO 2850°C (5162°F)
Boiling point: as CaO 579°C (1076°F)
Flash point: Not flammable

Evaporation rate (= 1): Data not available
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available
Relative density (Specific gravity): 2.24
Solubility(ies): 0.185% @ 0°C in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: $Ca(OH)_2$
Molecular weight: 74.10

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Absorbs CO_2 from air to form calcium carbonate.
Incompatible materials: Acids, fluorine.
Hazardous decomposition products: None known.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 7340 mg/kg
Skin corrosion/irritation: Skin-rabbit - Irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenicity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Inhalation may cause sore throat, burning sensation.
Ingestion: Ingestion may cause burning sensation, abdominal pain, abdominal cramps, vomiting.
Skin: Contact with skin causes redness, roughness, pain, dry skin, burns, blisters.
Eyes: Contact with eyes causes redness, pain, severe deep burns.
Signs and symptoms of exposure: Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: EW2800000

Section 12 Ecological Information

Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 220 mg/L/48 hours
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
Exceptions: Not applicable
2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Calcium hydroxide	Listed	Not listed	D002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: February 2, 2018 **Supercedes:** November 18, 2016

Section 1 Chemical Product and Company Identification

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665 Carbon Street
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CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
1 703-741-5500 (from anywhere in the world).
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**IODINE-POTASSIUM IODIDE SOLUTION**
Synonyms	Iodine-Iodide / Iodine Solution / Iodine / Iodine Lugol's Dilute / Gram's Iodine Solution / Dilute Lugol's Solution

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07 / GHS09
Target organs: Thyroid, kidneys, endocrine system, skin, eyes, reproductive system, central nervous system.

GHS Classification:
Acute toxicity, dermal (Category 4)
Acute toxicity, inhalation (Category 4)
Aquatic toxicity, acute (Category 1)

GHS Label information: **Hazard statement(s):**
H312: Harmful in contact with skin.
H332: Harmful if inhaled.
H400: Very toxic to aquatic life.

Precautionary statement(s):
P261: Avoid breathing mist/vapours/spray.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P312: Call a POISON CENTER or doctor if you feel unwell.
P362+P364: Take off contaminated clothing and wash it before reuse.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor if you feel unwell.
P391: Collect spillage.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	95.10%	231-791-2
Potassium iodide	7681-11-0	3.05%	231-659-4
Iodine	7553-56-2	1.85%	231-442-4

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Harmful if inhaled.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: HARMFUL IN CONTACT WITH SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Harmful in contact with skin.

Section 5 Fire Fighting Measures

Extinguishing Media: Use any media suitable for extinguishing supporting fire.

General information: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, mist or spray. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Iodine CAS # 7553-56-2	TWA: 0.01 ppm(IFV)/ STEL: 0.1 ppm(V)	STEL: C 0.1 ppm/C 1 mg/m^3	STEL: C 0.1 ppm/C 1 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Deep amber liquid.
Odor: Characteristic odor.
Odor threshold: Not applicable.
pH: Data not available.
Melting / Freezing point: ~ 0°C (~ 32°F) [water]
Boiling point: ~ 100°C (212°F) [water]
Flash point: Not flammable.

Evaporation rate (Water **= 1):** < 1
Flammability (solid/gas): Not applicable.
Explosion limits: Lower / Upper: Not applicable
Vapor pressure (mm Hg): 14 [water]
Vapor density (Air = 1): 0.7 [water]
Relative density (Specific gravity): 1.0 [water]
Solubility(ies): Complete in water.

Partition coefficient: (n-octanol / water): Not applicable
Auto-ignition temperature: Not applicable
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Mixture
Molecular weight: Mixture

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Stable under recommended storage conditions. Excessive temperatures which cause evaporation.

Incompatibilities with other materials: Metals or unsaturated organic compounds, ammonia solutions or alkaline solutions of ammonia salts. Will form explosive nitrogen iodides when reacted with gaseous ammonia.

Hazardous decomposition products: Toxic iodide fumes.

Section 11 Toxicological Information

Acute toxicity: Oral-Rat LD50: 14,000 mg/kg [Iodine CAS # 7553-56-2]
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Inhalation-rat 3.1 mg/m^3 / 24 hour / 13 weeks - continuous [Iodine CAS # 7553-56-2]
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Symptoms include cough, wheezing, and labored breathing. Symptoms may be delayed.
Ingestion: Causes abdominal pain, diarrhea, nausea, and vomiting. Ingestion of levels of 2-3 grams of iodine may cause death.
Skin: Contact may cause redness and pain.
Eyes: Contact causes watering of the eyes, redness and pain.
Signs and symptoms of exposure: Effects of short-term exposure: Lachrymator. The substance is severely irritating to the eyes and the respiratory tract, and is irritating to the skin. Inhalation of the vapor may cause asthma-like reactions. Inhalation of the vapor may cause lung edema. The effects may be delayed. Effects of long-term exposure: Repeated or prolonged contact may cause skin sensitization in rate cases. Repeated or prolonged inhalation exposure may cause asthma-like syndrome. The substance may have effects on the thyroid. Specific data not available for this mixture. Exercise appropriate procedures to minimize potential hazards..
Additional information: RTECS #: NN1575000 [Iodine CAS # 7553-56-2]

Section 12 Ecological Information

Toxicity to fish: Very toxic to aquatic life.
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

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Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
Exceptions: Not applicable
2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Iodine	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Potassium iodide	Listed	Not listed	Not listed	Listed	Not listed	

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: February 27, 2018 **Supercedes:** February 22, 2018

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Not for drug, food or household use.

Product	**1% PHENOLPHTHALEIN IN ISOPROPYL ALCOHOL SOLUTION**
Synonyms	1% Phenolphthalein in IPA

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02 / GHS07 / GHS08
Target organs: Central nervous system, Liver, Kidneys.

GHS Classification:
Flammable liquid (Category 2)
Eye irritation (Category 2)
STOT-SE (Category 2)
Mutagenicity (Category 2)
Carcinogen (Category 1B)
Reproductive toxicity (Category 2)

GHS Label information: **Hazard statement(s):**
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H341: Suspected of causing genetic defects.
H350: May cause cancer.
H361: Suspected of damaging fertility.

Precautionary statement(s):
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe fume/gas/mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P308+P313: If exposed or concerned: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.
P403+P235: Store in a well-ventilated place. Keep cool.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) **-** Not Known
Physical hazards not otherwise classified (PHNOC) **-** Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Isopropyl alcohol	67-63-0	70%	200-661-7
Water	7732-18-5	29%	231-791-2
Phenolphthalein	77-09-8	1%	201-004-7

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL. IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Isopropanol	TWA: 200 ppm / STEL: 400 ppm	TWA: 400 ppm / 980 mg/m^3	TWA: 400 ppm / STEL: 500 ppm

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.
Odor: Aromatic odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: Approximately -50°C (-58°F)*
Boiling point: Approximately 85-100°C (185-212°F)*
Flash point: 21.7°C (71°F) TCC [70% IPA]

Evaporation rate (Butyl acetate **= 1):** >1
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: 2% / 12% [Pure IPA]
Vapor pressure (mm Hg): 33 mm @20°C [Pure IPA]
Vapor density (Air = 1): 2.1 [Pure IPA]
Relative density (Specific gravity): 0.8*
Solubility(ies): Complete in water.

Partition coefficient: (n-octanol / water): Data not available
Auto-ignition temperature: 399°C (750°F) ASTM-E659-78 [Pure IPA]
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formu la: Mixture
Molecular weight: Mixture

*[70% IPA]

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizing materials, caustics, aluminums, metals, nitroform, oleum, chlorinated compounds can react vigorously with this alcohol.

Hazardous decomposition products: Oxides of carbon.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: >2000 mg/kg ; Inhalation-rat LC50: >5000 ppm/1hr [Isopropanol]
Skin corrosion/irritation: Skin-rabbit - Slight irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: Reasonably anticipated to be a human carcinogen. [Phenolphthalein]
IARC classified: Group 2B: Possibly carcinogenic to humans. [Phenolphthalein]
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
CA Prop 65: ⚠ WARNING! :This product can expose you to Phenolphthalein, which is known to the State of California to cause cancer.
Reproductive toxicity: Data not available
STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
STOT-repeated exposure: Data not available
Aspiration hazard: Yes
Potential health effects:
Inhalation: Inhalation of high vapor concentrations may cause central nervous system depression resulting in dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat. Continued inhalation may result in unconsciousness and death.
Ingestion: Aspiration hazard. Liquid can directly enter the lungs (aspirated) when swallowed or vomited. Serious lung damage and possible fatal chemical pneumonia can develop if this occurs.
Skin: Prolonged or repeated contact may cause irritation and drying, cracking and defatting of the skin which can lead to dermatitis.
Eyes: Contact causes burning sensation, redness, swelling, and/or blurred vision.
Signs and symptoms of exposure: See Potential health effects above.
Additional information: RTECS #: NT8050000 [Isopropanol] / SM8380000 [Phenolphthalein]

Section 12 Ecological Information

Toxicity to fish: Pimephales promelas (Fish, fresh water) LC50: 9640 mg/l/96 hours [Isopropanol]
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = >10,000 mg/l/24 hours [Isopropanol]
Toxicity to algae: Scenedesmus quadricauda (Algae), LOEC50 = 1,800 mg/l/7 days [Isopropanol]
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1219
Shipping name: Isopropanol solution
Hazard class: 3
Packing group: II
Reportable Quantity: No
Marine pollutant: No
Exceptions: Limited quantity equal to or less than 1 L
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Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Isopropyl alcohol	Listed	Not listed	Not listed	Listed	Not listed	⚠ WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
Phenolphthalein	Listed	Not listed	Not listed	Listed	Not listed	

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: August 23, 2018 **Supercedes:** May 1, 2018

MANUFACTURING STATEMENT

MANUFACTURER'S CERTIFICATE, CERTIFICATE OF ALIMENTARITY,
HEALTH CERTIFICATE, SANITARY CERTIFICATE, QUALITY CERTIFICATE

We hereby certify that the above mentioned product: Is legally manufactured for Nova Panamedical, S.A. / ACTIRENT, S.A. nova +QSO® according to production recommendations and sanitary measures and complies with the purity specifications of the Food Chemical Codex (FCC). Does not contain any harmful ingredients or additives injurious for the health of the consumer and is fit for food applications. Local legislation should be consulted before use of product.
Is free for sale. The manufacturing premises are operated according to good manufacturing practices as described in the FDA 21CFR110. Procedures for the prevention of cross contamination of products are installed together with the state-of-the art quality control measures. This document is drawn up at the request of the interested party in order to be submitted to the appropriate authorities.

Statement on GMO status for +QSO®

Nova Panamedical, S.A. / ACTIRENT, S.A. nova +QSO® is aware of the existence of legislation1 on Genetically Modified (GM) Food in various countries and wants to be transparent in the information supplied to our customers about our products.
Regarding the product with the above mentioned brand name we can inform you that: This product is not a GMO and does not contain a GMO or recombinant DNA material; The micro-organism used in the process and all formulating agents (such as carriers or diluents) are of non-GM origin.

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1 Most relevant: Regulation (EC) No 1829/2003 on Genetically Modified Food and Feed.

Avenida Petapa 52-80 zona 12, Ofibodegas Petapa #40
Tel: +502 2295 8680 Código Postal 01012
Guatemala, Guatemala, Centroamérica

Stability statement +QSO®

Regarding the products with the above mentioned brand name we can inform you that:

+QSO® has a recommended storage temperature of 4-8°C whatever the presentation is

When stored under these conditions and during the shelf life period, as defined on the Product Specification Sheet of the product, the +QSO® intrinsic formulation inhibits the growth of the majority of microorganisms. The expected enzymatic activity loss during the shelf life period and under the recommended storage conditions is recorded on each product specification sheet. When the product is stored at conditions deviating from the recommended storage conditions, the expected enzymatic activity loss will be higher than the one recorded on each product specification sheet.

As indication, the loss of activity at different temperatures is estimated to be:

At 20°C the enzymatic activity loss is expected to be less than 0.1% per day.

At 30°C the enzymatic activity loss is expected to be less than 0.3% per day.

In our experience, the freezing of the product (for example at -25°C) has no negative effect on the Enzymatic activity of the product.

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SAFETY DATA SHEET +QSO®

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: +QSO® 100

Internal code: **740117140001 0**

Synonyms: Granulated enzyme (enzyme protein) in tablet form; rennet tablet

Chemical formula: Not applicable.

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

Recommended use: **This product is an enzymatic preparation used in the food industry**.

1.3 Details of the supplier of the safety data sheet:

Supplier:

Nova Panamedical, S.A. / ACTIRENT, S.A. nova +QSO®

Avenida Petapa 52-80 zona 12 Ofibodega Petapa #40

Guatemala, Guatemala 01012

Telephone no.: +**502 22958680**

e-mail address: novamasqueso@actirent.net

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition: **Mixture**

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Resp. Sens. 1, H334

See Section 16 for the full text of the R-phrases declared above.

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification: R42

See Section 16 for the full text of the R-phrases declared above

2.2 Label elements

Hazard pictogram:
Signal word: Danger
Hazard statements: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements

Prevention: In case of inadequate ventilation wear respiratory protection. Avoid breathing dust.
Response: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician.
Storage: Not applicable.
Disposal: Not applicable.
Hazardous ingredients: endopeptidase

2.3 Other hazards

Hazard statements: Not available

SECTION 3: Composition/information on ingredients

Powder preparation of microbial proteases extracted from Rhizomucor miehei containing microcrystalline cellulose (cspt); magnesium stearate, vegetal grade USP; silicate dioxide.

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, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

IUB number: endopeptidase: 3.4.2x.xx. There is no general IUB number for proteinases. But all these enzymes fall under the 3.4.2x.xx category.
Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

Wash out mouth with water

Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Skin contact

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.
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

4.1 Description of first aid measures

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 the event of any complaints or symptoms, avoid further exposure.
Protection of first-aiders: 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Ingestion: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Eye contact: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Skin contact: No specific data.
Ingestion: No specific data.
Inhalation: Adverse symptoms may include the following: wheezing and breathing difficulties; asthma
Eye contact: No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Small fire
Suitable: Use dry chemical or CO2.
Not suitable: None known.
Large fire
Suitable: Use extinguishing media suitable for surrounding materials.
Not suitable: None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture: Fine dust clouds may form explosive mixtures with air.
Hazardous combustion products: In case of fire, may produce toxic and/or corrosive decomposition products.

5.3 Advice for firefighters

Special protective actions for fire fighters: Firewater contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Special protective equipment for fire fighters: 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 firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions:

Use suitable protective equipment (section 8). Avoid direct contact with liquid. After a leak avoid inhaling the fumes or the dry product powder. Avoid high-pressure washing and squirts (Aerosol formation). Keep down leaking liquid. Pick up the leaked liquid with mechanical tools. Wash the remaining product with plenty of water. Air out the room. Remove and wash contaminated clothes.

6.2 Environmental precautions:

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).

6.3 Methods and materials for containment and cleaning up

Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, watercourses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Note: see section 1 for emergency contact information and section 13 for waste disposal.
Large spill:
Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Small spill:

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). 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. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease 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. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.
Do not reuse container.

Advice on general occupational hygiene: 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.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 4 to 8°C (39.2 to 46.4°F). Store in accordance with local regulations. 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. 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 unlabeled containers.
Use appropriate containment to avoid environmental contamination. Keep in a cool and dry place. The product must be stored in the original, sealed containers

Packaging materials Suitable: Polyethylene containers.

7.3 Specific end use(s)

Recommendations: Not available
Industrial sector specific solutions: Not available.

SECTION 8: Exposure controls/personal protection

Exposure limit: Non-set
Breathing apparatus protection: Wear a suitable protection in case of aerosol formation
Hand protection: Practical experience shown protection gloves supply a sufficient protection.
Eyes protection: Protection glasses or face mask
Skin protection: Protective clothes
Environment rules: Do not throw out in the environment

SECTION 9: Physical and chemical properties

Physical state: Solid. [Granular]
Color: White to brown. (Product color may vary from batch to batch)
Solubility in water: Easily soluble in cold water.
Odor: Slight fermentation odor.
pH: Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability: The product is stable.
10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid No specific data.
10.5 Incompatible materials: No specific data.
10.6 Hazardous decomposition products: No specific data.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name: endopeptidase
Result: LD50 Oral
Species: Rat
Dose: >5000 mg/kg
Exposure: -
Conclusion/Summary: Not available.

Irritation/Corrosion Conclusion/Summary
Skin: Not available.
Eyes: Not available.
Respiratory: Not available.
Sensitization Conclusion/Summary
Skin: Not available.
Respiratory: Not available.

Conclusion/Summary **Carcinogenicity**: Not available.
Conclusion/Summary **Teratogenicity**: Not available.
Conclusion/Summary **Reproductive toxicity**: Not available.
Specific target organ toxicity (single exposure): Not available.

Potential acute health effects
Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Ingestion: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Eye contact: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics
Skin contact: No specific data.
Ingestion: No specific data.
Inhalation Adverse symptoms may include the following: Wheezing and breathing difficulties; asthma
Eye contact: No specific data.

General: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Mutagenicity

SECTION 12: Ecological information

12.1 Toxicity
Conclusion/Summary: Not available

12.2 Persistence and degradability
Conclusion/Summary: Not available

12.3 Mobility in soil
Soil/water partition coefficient (KOC): Not available.
Mobility: Not available.

12.4 Results of PBT and vPvBs assessment
PBT: Not applicable.
vPvBs: Not applicable.

12.6 Other adverse effects: No known significant effects or critical hazards.
Remarks: The preparation is believed not to be dangerous to the environment with respect to mobility, persistence and degradability, bio-accumulative potential, aquatic toxicity and other data relating to eco-toxicity.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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.

Hazardous waste: The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions:

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

No special precaution has to be used for transport of this product

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

15.2 Chemical Safety

Assessment: Not applicable.

SECTION 16: Other information

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Full text of abbreviated H statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

Full text of classifications [CLP/GHS]:

Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

Resp. Sens. 1, H334 RESPIRATORY SENSITIZATION - Category 1

Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2

STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

Full text of abbreviated R phrases:

R36/37/38- Irritating to eyes, respiratory system and skin.

R42- May cause sensitization by inhalation.

Full text of classifications [DSD/DPD]: Xi - Irritant

Abbreviations and acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labeling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Sources of key data: Literature data and/or investigation reports are available through the manufacturer.

Internal code: **740117140001 0**

Training advice: Handling of this substance or preparation is restricted to skilled personnel only. Safe handling of enzymes is detailed in 'AMFEP Guide to the Safe handling of Enzymes' (www.amfep.org).

Notice to reader

The information contained in the Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications.
The user is responsible for ensuring that appropriate precautions are taken and for satisfying them that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.

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