



Microzyme P-300 (AFCO 3239)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 10/30/2024

Version: 1.1

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Microzyme P-300

Product Code: AFCO 3239

Synonyms: Microzyme P-300

Intended Use of the Product

Use of the Substance/Mixture: Powdered enzyme cleaner developed for Reverse Osmosis/Ultra-Filtration (RO/UF) membranes. For professional use only.

Name, Address, and Telephone of the Responsible Party

Company

AFCO

550 Development Avenue

Chambersburg, PA 17201

T: 800-345-1329

www.afcocare.com

Emergency Telephone Number

Emergency Number : 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Eye Irrit. 2A H319

Resp. Sens. 1 H334

Aquatic Acute 3 H402

Aquatic Chronic 3 H412

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger.

Hazard Statements (GHS-US)

: H319 - Causes serious eye irritation

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

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements (GHS-US)

: P261 - Avoid breathing dust, fumes.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.

P284 - Wear respiratory protection.

P304+P340 - IF INHALED: Remove person 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.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P501 - Dispose of contents/container according to local, regional, national, territorial,

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provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: N/A.

Other Hazards: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. When heated to decomposition, emits toxic fumes.

Unknown Acute Toxicity (GHS-US) Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name	Product identifier	% (w/w)	Classification (GHS-US)
Sodium sulfate	(CAS No) 7757-82-6	50 - 60	Not classified
Sodium carbonate	(CAS No) 497-19-8	30 - 40	Eye Irrit. 2A, H319
Pentasodium triphosphate	(CAS No) 7758-29-4	5 - 10	Not classified
Benzenesulfonic acid, C10-16-alkyl derivatives, sodium salts	(CAS No) 68081-81-2	1 - 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Subtilisins (proteolytic enzymes)	(CAS No) 9014-01-1	0.1 - 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16.

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Eye Contact: Flush with plenty of water for at least 15 minutes. Seek medical advice if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye irritation. Inhalation may cause allergic respiratory reaction with asthma-like symptoms and difficulty breathing.

Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Contact: May cause skin irritation.

Eye Contact: Causes eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Not available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide, foam, dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

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Reactivity: When heated to decomposition, emits toxic fumes.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Toxic fumes are released. Sulfur oxides. Sodium oxides. Phosphorous oxide.

Other information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not allow product to spread into the environment. Do NOT breathe (dust, fumes). Do not get in eyes, on skin, or on clothing.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid. Avoid generation of dust during clean-up of spills.

Methods for Cleaning Up: Contact competent authorities after a spill. Recover the product by vacuuming, shovelling or sweeping. Cautiously neutralize remainder. Avoid generation of dust during clean-up of spills.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated to decomposition, emits toxic fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from heat, incompatible materials.

Incompatible Materials: Strong acids. Strong oxidizers.

Special Rules on Packaging: Keep only in original container.

Specific End Use(s): Powdered enzyme cleaner developed for Reverse Osmosis/Ultra-Filtration (RO/UF) membranes. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Subtilisins (proteolytic enzymes) (9014-01-1)		
USA ACGIH	ACGIH Ceiling (mg/m ³)	0.00006 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	0.00006 mg/m ³
Ontario	OEL Ceiling (mg/m ³)	0.00006 mg/m ³
Québec	Plafond (mg/m ³)	0.00006 mg/m ³ (Proteolytic enzymes)

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Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas. Alarm detectors should be used when toxic gases may be released.

Personal Protective Equipment: Protective goggles. Insufficient ventilation: wear respiratory protection. Gloves. Face shield.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: White powder with tan specks
Odor	: Low
Odor Threshold	: Not available
pH	: 10.5 - 11 (1%)
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: None
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not flammable
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Specific Gravity	: Not available
Solubility	: Complete
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

Reactivity: When heated to decomposition, emits toxic fumes.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Extremely high temperatures. Heat. Incompatible materials.

Incompatible Materials: Strong acids, strong oxidizers.

Hazardous Decomposition Products: Carbon oxides (CO, CO₂). Thermal decomposition generates: Toxic gases. Sodium oxides. Sulfur oxides. Phosphorus oxides.

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SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified.

LD50 and LC50 Data: Not available.

Skin Corrosion/Irritation: Not classified **pH:** 10.5 - 11 (1%)

Serious Eye Damage/Irritation: Causes serious eye irritation. **pH:** 10.5 - 11 (1%)

Respiratory or Skin Sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ Cell Mutagenicity: Not classified.

Teratogenicity: Not available.

Carcinogenicity: Not classified.

Specific Target Organ Toxicity (Repeated Exposure): Not classified.

Reproductive Toxicity: Not classified.

Specific Target Organ Toxicity (Single Exposure): Not classified.

Aspiration Hazard: Not classified.

Symptoms/Injuries After Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/Injuries After Skin Contact: May cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes eye irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Sodium carbonate (497-19-8)	
LD50 Oral Rat	4090 mg/kg
LC50 Inhalation Rat	2300 mg/m ³ (Exposure time: 2 h)
Pentasodium triphosphate (7758-29-4)	
LD50 Oral Rat	3100 mg/kg
LD50 Dermal Rabbit	>7940 mg/kg
Benzenesulfonic acid, C10-16-alkyl derivatives, sodium salts (68081-81-2)	
ATE US (oral)	500.00 mg/kg body weight
Sodium sulfate (7757-82-6)	
LD50 Oral Rat	>10,000 mg/kg
Subtilisins (proteolytic enzymes) (9014-01-1)	
LD50 Oral Rat	1.8 g/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Harmful to aquatic life with long lasting effects.

Sodium carbonate (497-19-8)	
LC50 Fish 1	300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	265 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	310 - 1220 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Sodium sulfate (7757-82-6)	
LC50 Fish 1	13500 - 14500 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	2564 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	> 6800 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Subtilisins (proteolytic enzymes) (9014-01-1)	
LC50 Fish 1	14.6 mg/l
EC50 Daphnia 1	0.306 mg/l
ErC50 (algae)	0.513 (0.513 - 1.48) mg/l
NOEC chronic fish	2 mg/l

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Persistence and Degradability

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Persistence and Degradability	May cause long-term adverse effects in the environment.

Bioaccumulative Potential

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Bioaccumulative Potential	Not established.
Sodium carbonate (497-19-8)	
BCF fish 1	(no bioaccumulation)

Mobility in Soil Not available.

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT	:	Not regulated for transport.
14.2 In Accordance with IMDG	:	Not regulated for transport.
14.3 In Accordance with IATA	:	Not regulated for transport.
14.4 In Accordance with TDG	:	Not regulated for transport.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard.
Sodium carbonate (497-19-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Pentasodium triphosphate (7758-29-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Benzenesulfonic acid, C10-16-alkyl derivatives, sodium salts (68081-81-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Sodium sulfate (7757-82-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Subtilisins (proteolytic enzymes) (9014-01-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	

US State Regulations

Sodium carbonate (497-19-8)	
U.S. - Texas - Effects Screening Levels - Long Term.	
U.S. - Texas - Effects Screening Levels - Short Term.	
Pentasodium triphosphate (7758-29-4)	
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances.	
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances.	
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List.	
RTK - U.S. - Pennsylvania - RTK (Right to Know) List.	
U.S. - Texas - Effects Screening Levels - Long Term.	
U.S. - Texas - Effects Screening Levels - Short Term.	
Benzenesulfonic acid, C10-16-alkyl derivatives, sodium salts (68081-81-2)	
U.S. - Texas - Effects Screening Levels - Long Term.	
U.S. - Texas - Effects Screening Levels - Short Term.	

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Sodium sulfate (7757-82-6)

RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List.
RTK - U.S. - Pennsylvania - RTK (Right to Know) List .
U.S. - Texas - Effects Screening Levels - Long Term.
U.S. - Texas - Effects Screening Levels - Short Term.

Subtilisins (proteolytic enzymes) (9014-01-1)

U.S. - Texas - Effects Screening Levels - Long Term.
U.S. - Texas - Effects Screening Levels - Short Term.

Canadian Regulations

Sodium carbonate (497-19-8)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Pentasodium triphosphate (7758-29-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Benzenesulfonic acid, C10-16-alkyl derivatives, sodium salts (68081-81-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Sodium sulfate (7757-82-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Subtilisins (proteolytic enzymes) (9014-01-1)

Listed on the Canadian DSL (Domestic Substances List) inventory.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 10/30/2024

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

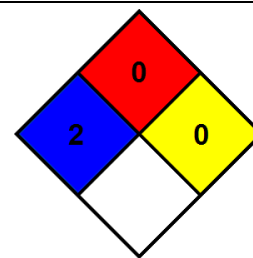
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Resp. Sens. 1	Respiratory sensitisation Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

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- NFPA Health Hazard** : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA Fire Hazard** : 0 - Materials that will not burn.
- NFPA Reactivity** : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

- Health** : 2 Moderate Hazard - Temporary or minor injury may occur.
- Flammability** : 0 - Minimal Hazard.
- Physical** : 0 - Minimal Hazard.

Party Responsible for the Preparation of This Document

AFCO
550 Development Avenue
Chambersburg, PA 17201
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS SDS 2015 (U.S., Can., Mex.)