



Vigil-Quat (AFCO 4312)

Safety Data Sheet

Revision Date: 08/31/2026

Version: 2.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier

Product Form: Mixture

Product Name: Vigil-Quat

Product Code: AFCO 4312

Intended Use of the Product

Use of the Substance/Mixture: Sanitizer for use on food contact surfaces in food processing plants. For professional use only.

Product Dilution Information: 0.20% - 1.6%

Name, Address, and Telephone of the Responsible Party

Company

AFCO

800 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

PRODUCT as SOLD

Skin Corr. 1B H314

Eye Dam. 1 H318

Aquatic Acute 2 H401

Aquatic Chronic 2 H411

PRODUCT at USE DILUTION

Eye Irrit. 3 H320

Label Elements

PRODUCT as SOLD

Hazard Pictograms



Signal Word

: Danger

Hazard Statements

: H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H401 - Toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements (GHS-US)

: P260 - Do not breathe mist if inhalable mists occur during use.

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.

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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.

P310 - Immediately call a POISON CENTER or doctor/physician.

Vigil-Quat (AFCO 4312)

Safety Data Sheet

P321 - Specific treatment (see section 4).

P363 - Wash contaminated clothing before reuse.

P391 - Collect spillage.

P405 - Store locked up.

P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

PRODUCT at USE DILUTION

Hazard Pictograms : None.

Signal Word : Warning.

Hazard Statements : H320 - Causes eye irritation

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

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. When heated to decomposition, emits toxic fumes.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances: Not applicable, product is a mixture.

Mixture:

PRODUCT as SOLD

Name	Product identifier	% (w/w)	Classification (GHS)
Water	(CAS No) 7732-18-5	70 - 90	Not classified
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	(CAS No) 68424-85-1	1 - 5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1-Decanaminium, N,N-dimethyl-N-octyl-, chloride	(CAS No) 32426-11-2	1 - 5	Skin Corr. 1B, H314 Eye Dam. 1, H318
Ethyl alcohol	(CAS No) 64-17-5	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 Aquatic Acute 2, H401
1-Octanaminium, N,N-dimethyl-N-octyl-, chloride	(CAS No) 5538-94-3	1 - 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 1, H400
Didecyldimethylammonium chloride	(CAS No) 7173-51-5	1 - 5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

PRODUCT at USE DILUTION

Name	Product identifier	% (w/w)	Classification (GHS)
Water	(CAS No) 7732-18-5	>99	
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	(CAS No) 68424-85-1	<0.048	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1-Decanaminium, N,N-dimethyl-N-octyl-,	(CAS No) 32426-11-2	<0.036	Skin Corr. 1B, H314

Vigil-Quat (AFCO 4312)

Safety Data Sheet

chloride			Eye Dam. 1, H318
1-Octanaminium, N,N-dimethyl-N-octyl-, chloride	(CAS No) 5538-94-3	<0.0144	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 1, H400
Didecyltrimethylammonium chloride	(CAS No) 7173-51-5	<0.0216	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

The exact percentage (concentration) of the composition and/or ingredients has been withheld as a trade secret, in accordance with 29 CFR § [1910.1200\(i\)](#).

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

PRODUCT as SOLD

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. Immediately call a POISON CENTER or doctor/physician.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

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

PRODUCT at USE DILUTION:

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

Inhalation: Remove to fresh air. Get medical attention if symptoms occur.

Skin Contact: Rinse with plenty of water.

Eye Contact: Rinse with plenty of water.

Ingestion: Rinse mouth. Get medical attention if symptoms occur.

Most Important Symptoms and Effects Both Acute and Delayed

PRODUCT as SOLD

General: Causes serious eye damage. Corrosive. Causes burns. Contact may cause immediate severe irritation progressing quickly to chemical burns.

Inhalation: None under normal and intended conditions of use.

Skin Contact: Causes severe irritation which will progress to chemical burns.

Eye Contact: Causes serious eye damage.

Ingestion: Ingestion is likely to be harmful or have adverse effects. Contact may cause immediate severe irritation progressing quickly to chemical burns.

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: FIREFIGHTING 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.

Vigil-Quat (AFCO 4312)

Safety Data Sheet

Reactivity: Thermal decomposition generates: Corrosive vapors. 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: May liberate toxic gases. Nitrogen oxides. Carbon oxides (CO, CO₂). Corrosive vapors. Hydrogen chloride.

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 breathe mist or spray. 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: As an immediate precautionary measure, isolate spill or leak area in all directions. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb spillage to prevent material damage. Cautiously neutralize spilled liquid. Contact competent authorities after a spill.

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. Corrosive vapors are released.

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 extremely high or low temperatures, incompatible materials.

Incompatible Materials: Strong oxidizers.

Special Rules on Packaging: Keep only in original container.

Specific End Use(s): Sanitizer on food contact surfaces in food processing plants. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Ethyl alcohol (64-17-5)		
Mexico	OEL TWA (mg/m ³)	1900 mg/m ³
Mexico	OEL TWA (ppm)	1000 ppm
USA ACGIH	ACGIH STEL (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1900 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm

Vigil-Quat (AFCO 4312)

Safety Data Sheet

USA IDLH	US IDLH (ppm)	3300 ppm (10% LEL)
Ontario	OEL STEL (ppm)	1000 ppm
Québec	VEMP (mg/m ³)	1880 mg/m ³
Québec	VEMP (ppm)	1000 ppm

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Use effective ventilation system to maintain air concentrations below occupational exposure limits. Ensure all national/local regulations are observed

Personal Protective Equipment: Protective goggles. Face shield. Protective clothing. Gloves.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Corrosionproof clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: A respirator is not needed under normal and intended conditions of product use. If workers are exposed to airborne concentrations above the exposure limits, they must use NIOSH certified respirators.

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

PRODUCT at USE DILUTION:

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. If user operations generate mist or spray use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or regulatory limits.

Personal Protective Equipment: Protective goggles.



Hand Protection: None usually needed.

Eye Protection: Safety goggles.

Skin and Body Protection: None usually needed.

Respiratory Protection: None usually needed.

Thermal Hazard Protection: None usually needed.

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	: Liquid
Particle Characteristics	: No data available
Appearance	: Clear, colorless to light peach
Odor	: Mild
Odor Threshold	: Not available
pH	: 6 - 9
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: 100°C (212°F)
Flash Point	: >93.3°C (>199.9°F)
Auto-ignition Temperature	: None
Decomposition Temperature	: Not available

Vigil-Quat (AFCO 4312)

Safety Data Sheet

Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Specific Gravity	: 0.99
Solubility	: Complete
Log Pow	: Not available
Log Kow	: Not available
Viscosity, Kinematic	: Not available
Viscosity, Dynamic	: Not available
Explosive Properties	: Not expected to present an explosion hazard.
Oxidizing Properties	: Not expected to present an oxidizing hazard.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Thermal decomposition generates: Corrosive vapors. 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 or low temperatures. Incompatible materials.

Incompatible Materials: Strong oxidizers.

Hazardous Decomposition Products: Carbon oxides (CO, CO₂). Thermal decomposition generates: Corrosive vapors. Toxic gases. Hydrogen chloride. Nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

PRODUCT as SOLD

Acute Toxicity: Not classified.

LD50 and LC50 Data: Not available.

Skin Corrosion/Irritation: Causes severe skin burns. (pH: 6 - 9)

Serious Eye Damage/Irritation: Causes serious eye damage. (pH: 6 - 9)

Respiratory or Skin Sensitization: Not classified.

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: None under normal and intended conditions of use.

Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Contact may cause immediate severe irritation progressing quickly to chemical burns.

PRODUCT at USE DILUTION:

Acute Toxicity: Not classified.

LD50 and LC50 Data: Not available.

Skin Corrosion/Irritation: None expected under normal use.

Serious Eye Damage/Irritation: Causes eye irritation.

Respiratory or Skin Sensitization: Not classified.

Germ Cell Mutagenicity: Not classified.

Vigil-Quat (AFCO 4312)

Safety Data Sheet

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: None expected under normal use.

Symptoms/Injuries After Skin Contact: None expected under normal use.

Symptoms/Injuries After Eye Contact: Redness, irritation.

Symptoms/Injuries After Ingestion: Swallowing a small quantity of this material will result in irritation.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Ethyl alcohol (64-17-5)	
LC50 Inhalation Rat (mg/l)	124.7 mg/l/4h
Didecyldimethylammonium chloride (7173-51-5)	
LD50 Oral Rat	329 mg/kg
LD50 Dermal Rat	2001 mg/kg
Water (7732-18-5)	
LD50 Oral Rat	>90000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

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

Ethyl alcohol (64-17-5)	
LC50 Fish 1	9.468 (9.468 - 12.624) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) converted from ml/l
EC50 Daphnia 1	9268 (9268 - 14221) mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	2 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

Persistence and Degradability

Vigil-Quat (AFCO 4312)	
Persistence and Degradability	May cause long-term adverse effects in the environment.

Ethyl alcohol (64-17-5)	
Persistence and Degradability	Not established.

Bioaccumulative Potential

Vigil-Quat (AFCO 4312)	
Bioaccumulative Potential	Not established.

Ethyl alcohol (64-17-5)	
Log Pow	-0.32
Bioaccumulative Potential	Not established.

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.

Ecology - Waste Materials: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : DISINFECTANTS, LIQUID, CORROSIVE N.O.S. (Quaternary Ammonium Compounds)

Vigil-Quat (AFCO 4312)

Safety Data Sheet

Hazard Class : 8
Identification Number : UN1903
Label Codes : 8
Packing Group : III
Marine Pollutant : Yes
ERG Number : 153



14.2 In Accordance with IMDG

Proper Shipping Name : DISINFECTANTS, LIQUID, CORROSIVE N.O.S. (Quaternary Ammonium Compounds)
Hazard Class : 8
Identification Number : UN1903
Packing Group : III
Label Codes : 8
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Marine pollutant : Yes



14.3 In Accordance with IATA

Proper Shipping Name : DISINFECTANTS, LIQUID, CORROSIVE N.O.S. (Quaternary Ammonium Compounds)
Packing Group : III
Identification Number : UN1903
Hazard Class : 8
Label Codes : 8
ERG Code (IATA) : 8L



14.4 In Accordance with TDG

Proper Shipping Name : DISINFECTANTS, LIQUID, CORROSIVE N.O.S. (Quaternary Ammonium Compounds)
Packing Group : III
Hazard Class : 8
Identification Number : UN1903
Label Codes : 8
Marine Pollutant (TDG) : Yes



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Vigil-Quat (AFCO 4312)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard.
1-Octanaminium, N,N-dimethyl-N-octyl-, chloride (5538-94-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
1-Decanaminium, N,N-dimethyl-N-octyl-, chloride (32426-11-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Ethyl alcohol (64-17-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Didcyldimethylammonium chloride (7173-51-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	

US State Regulations

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)
U.S. - Texas - Effects Screening Levels - Long Term

Vigil-Quat (AFCO 4312)

Safety Data Sheet

U.S. - Texas - Effects Screening Levels - Short Term
Ethyl alcohol (64-17-5)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New Jersey - Special Health Hazards Substances List U.S. - New York - Occupational Exposure Limits - TWAs U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Texas - City of Austin - Aerosol Paint and Glue Restrictions U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
Didecyldimethylammonium chloride (7173-51-5)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term

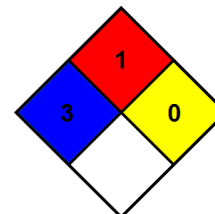
Canadian Regulations

1-Octanaminium, N,N-dimethyl-N-octyl-, chloride (5538-94-3)
Listed on the Canadian DSL (Domestic Substances List) inventory.
1-Decanaminium, N,N-dimethyl-N-octyl-, chloride (32426-11-2)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Ethyl alcohol (64-17-5)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Didecyldimethylammonium chloride (7173-51-5)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List) inventory.

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

SECTION 16: OTHER INFORMATION

Revision date	: 08/31/2026
NFPA Health Hazard	: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA Fire Hazard	: 1 - Must be preheated before ignition can occur.
NFPA Reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken, and medical treatment is given.
Flammability	: 1 - Slight Hazard.
Physical	: 0 - Minimal Hazard.

Prepared by:

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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.