

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : VANGUARD
Product code : 868

1.2. Other means of identification

Other means of identification : EPA REG NO: 6836-63-7116

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Sanitizer
Restrictions on use : For professional use only

1.4. Supplier's details

Christeyns North America, LLC
311 Staton Road
Greenville, NC 27834
USA
T 252-756-8616 / 800.869.6171
info@christeyns.us - www.christeyns.com

1.5. Emergency phone number

Emergency number : VELOCITY EHS (800) 255-3924 (24 HOURS)
(For use only in the event of emergencies involving a spill, leak, fire, exposure, or accident involving chemicals)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquid, Category 3	H226	Flammable liquid and vapor.
Acute toxicity (oral), Category 3	H301	Toxic if swallowed.
Acute toxicity (dermal), Category 3	H311	Toxic in contact with skin.
Acute toxicity (inhalation), Category 3	H331	Toxic if inhaled.
Skin corrosion/irritation, Category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

VANGUARD

Safety Data Sheet

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

Hazard statements (GHS US)	: H226 - Flammable liquid and vapor H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS US)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment. P241 - Use explosion-proof equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P260 - Do not breathe fumes, mists, vapors, or spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves, protective clothing, eye protection, and face protection. P301+P310 - If swallowed: Immediately call a poison center or doctor. 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. P304+P340 - If inhaled: Remove person to fresh air and keep 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. P321 - Specific treatment (see supplemental first aid instruction on this label). P363 - Take off immediately all contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use appropriate media to extinguish. P403+P235 - Store in a well-ventilated place. Keep cool. P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides	CAS-No.: 68424-95-3	45 - 70
Ethanol	CAS-No.: 64-17-5	10 - 30

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Treat symptomatically. Get medical attention immediately.
First-aid measures after skin contact	: Remove contaminated clothing and wash before reuse. Rinse skin with plenty of water for at least 15 minutes. If exposed to small amounts, get medical attention if symptoms occur or irritation persists. If exposed to large amounts, get medical attention immediately.
First-aid measures after eye contact	: Rinse immediately with water for 15 minutes, occasionally lifting upper and lower eyelids. Remove contact lenses, if present, and easy to do. Continue rinsing. Get medical attention immediately.

VANGUARD

Safety Data Sheet

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

First-aid measures after ingestion : Rinse mouth with water if the person is conscious. Do not induce vomiting unless directed by medical personnel. Get medical attention immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/injuries after inhalation : Toxic if inhaled. Causes serious damage to health by exposure through inhalation.
Symptoms/injuries after skin contact : Toxic in contact with skin. Burning pain and severe corrosive skin damage.
Symptoms/injuries after eye contact : Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.
Symptoms/injuries after ingestion : Toxic if swallowed. Ingestion may cause nausea, vomiting, sore throat, stomach-ache, and eventually lead to a perforation of the intestine.

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

Other medical advice or treatment : If this product is ingested, probable mucosal damage may contraindicate the use of gastric lavage. Treat the affected person appropriately. Measures against circulatory shock, respiratory depression and convulsion may be needed.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Do not use a water jet as this can spread the fire and may cause the splattering of corrosive liquid.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor. Decomposition products may include carbon oxides.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. In case of fire, do not breathe fumes. Move containers from the fire area if you can do so without risk. Prevent firefighting water from entering the environment.
Protection during firefighting : Wear a self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : For spills or leaks, contact a supervisor and/or emergency responder. Avoid contact with spilled material and keep unnecessary personnel away.

For emergency responders

Protective equipment : See Section 8 for recommended personal protective equipment. Ventilate the area and restrict access to the spill or leak zone. Have emergency procedures in place for treating exposures or incidents. Only trained and authorized personnel equipped with proper protective equipment should perform cleanup.

Environmental precautions : Avoid release onto the ground, into storm sewers, or bodies of water.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, soak up with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and collect all waste in suitable, labeled, and closed containers. Dispose according to local legislation (See Section 13).

VANGUARD

Safety Data Sheet

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

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practices. Use only with adequate ventilation. Avoid contact with skin, eyes, and clothing. Use appropriate personal protection equipment (PPE). Wash thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Keep away from sources of heat or ignition.
Incompatible products : Keep away from strong acids, strong bases, flammables/combustibles, oxidizers, and reactive metals (aluminum, zinc, magnesium, iron filings).

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Ethanol (64-17-5)	
USA - ACGIH® - Threshold Limit Values	
Local name	Ethanol
ACGIH® TLV® STEL	1880 mg/m³
	1000 ppm
Remark (ACGIH®)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl alcohol (Ethanol)
OSHA PEL TWA	1900 mg/m³
	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
Local name	Ethyl alcohol (Ethanol)
NIOSH REL 10h TWA	1000 ppm
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls : Maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable guidelines, use only with adequate ventilation. Eye wash facilities and emergency showers must be available when handling this product.

8.3. Individual protection measures, such as personal protective equipment

Materials for protective clothing:

Wear suitable protective clothing. Long sleeved protective clothing.

VANGUARD

Safety Data Sheet

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

Hand protection:
Chemical resistant PVC gloves
Eye protection:
Safety glasses with face shield

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Color	: Light yellow
Odor	: Solvent
Odor threshold	: No data available
pH	: 6.5 – 9 (68 °F)
pH solution concentration	: 100 g/l
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 109 °F
Flammability (solid, gas)	: Flammable liquid and vapor.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 7.678 lb/gal (77 °F)
Solubility	: Soluble in water.
Log Pow	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: < 108.696 mm²/s (77 °F)
Viscosity, dynamic	: < 100 mPa·s (77 °F)
Explosion limits	: No data available
Particle characteristics	: No data available

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides

Particle characteristics	No data available
--------------------------	-------------------

Ethanol

Particle characteristics	No data available
--------------------------	-------------------

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Combustible product. Contact with strong oxidizing agents may cause exothermic reactions.

10.2. Chemical stability

Stable under recommended storage and handling conditions. Avoid elevated temperatures and direct sunlight, which may increase evaporation and degradation.

VANGUARD

Safety Data Sheet

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

10.3. Possibility of hazardous reactions

No hazardous polymerization expected. Accumulation of vapors in confined or poorly ventilated areas may form flammable mixtures with air.

10.4. Conditions to avoid

Keep away from heat, sparks, open flames, hot surfaces, and other sources of ignition. Avoid prolonged exposure to air, sunlight, or high temperatures. Avoid confined spaces where vapors can accumulate.

10.5. Incompatible materials

Incompatible with strong oxidizing agents (e.g. peroxides, chromates, nitrates), strong acids, and strong bases.

10.6. Hazardous decomposition products

Thermal decomposition may produce hydrochloric acid fumes, nitrogen oxides, sulphur oxides, and other irritating/toxic vapors.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.
Acute toxicity (dermal) : Toxic in contact with skin.
Acute toxicity (inhalation) : Toxic if inhaled.

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides (68424-95-3)

LD50 oral rat	238 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 0,198 - 0,287
LD50 dermal rabbit	3861 mg/kg body weight Animal: rabbit, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 0 - 4292

Ethanol (64-17-5)

LD50 oral rat	7060 mg/kg Source: ECHA
LD50 oral	8300 mg/kg body weight Animal: mouse
LC50 Inhalation - Rat (Vapors)	116.9 mg/l Source: ECHA

Skin corrosion/irritation : Causes severe skin burns.
pH: 6.5 – 9 (68 °F)

Serious eye damage/irritation : Causes serious eye damage.
pH: 6.5 – 9 (68 °F)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Ethanol (64-17-5)

IARC group	1 - Carcinogenic to humans
------------	----------------------------

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Ethanol (64-17-5)

NOAEL (subchronic,oral,animal/male,90 days)	< 9700 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
---	---

VANGUARD

Safety Data Sheet

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

Ethanol (64-17-5)	
NOAEL (subchronic,oral,animal/female,90 days)	> 9400 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
Aspiration hazard	: Not classified
VANGUARD	
Viscosity, kinematic	< 108.696 mm ² /s (77 °F)
Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides (68424-95-3)	
Viscosity, kinematic	No data available
Ethanol (64-17-5)	
Viscosity, kinematic	No data available
Symptoms/injuries after inhalation	: Toxic if inhaled. Causes serious damage to health by exposure through inhalation.
Symptoms/injuries after skin contact	: Toxic in contact with skin. Burning pain and severe corrosive skin damage.
Symptoms/injuries after eye contact	: Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.
Symptoms/injuries after ingestion	: Toxic if swallowed. Ingestion may cause nausea, vomiting, sore throat, stomach-ache, and eventually lead to a perforation of the intestine.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

VANGUARD	
LC50 - Fish [1]	2 mg/l Test organisms (species): Oncorhynchus mykiss
EC50 - Crustacea [1]	< 1 mg/l Test organisms (species): Daphnia magna
Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides (68424-95-3)	
EC50 - Crustacea [1]	0.066 mg/l Test organisms (species): Daphnia magna
Ethanol (64-17-5)	
LC50 - Fish [1]	> 100 mg/l Source: SIDS 2005
ErC50 algae	275 mg/l Source: ECHA
NOEC (chronic)	9.6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'

12.2. Persistence and degradability

VANGUARD	
Persistence and degradability	Not rapidly degradable
Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides (68424-95-3)	
Persistence and degradability	Not rapidly degradable
Ethanol (64-17-5)	
Persistence and degradability	Not rapidly degradable

VANGUARD

Safety Data Sheet

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

12.3. Bioaccumulative potential

Ethanol (64-17-5)

Log Pow	-0.32 Source: ICSC
---------	--------------------

12.4. Mobility in soil

Quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides (68424-95-3)

Mobility in soil	747.3 Source: EPISUITE
------------------	------------------------

12.5. Other adverse effects

No additional information available

SECTION 13 Disposal considerations

Regional legislation (waste)	: Avoid unauthorized disposal. Do not dump into any body of water. Comply with federal, state/provincial and local laws/regulations. Do not reuse empty containers.
Waste treatment methods	: Do not allow the product to contaminate any body of water. Refer to Section 8 for personal protection equipment.

SECTION 14 Transport information

In accordance with DOT

DOT

14.1. UN number

UN1903

14.2. Proper Shipping Name

Disinfectants, liquid, corrosive n.o.s. (Dialkyldimethylammonium chloride)

Transport document description

UN1903 Disinfectants, liquid, corrosive n.o.s. (Dialkyldimethylammonium chloride), 8, II

14.3. Transport hazard class(es)

8



14.4. Packing group

II

14.5. Environmental hazards

Dangerous for the environment: No

No supplementary information available

14.6. Transport in bulk

Not applicable

VANGUARD

Safety Data Sheet

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

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN1903
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Ethanol(64-17-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

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

Issue date : 8/25/2026

Full text of hazard classes and H-statements	
H226	Flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled

Safety Data Sheet (SDS), USA ML

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.