



SAFETY DATA SHEET

Issuing Date: 8-31-2020

Revision Date: N/A

Revision No.: n/a

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name: VariGard Hand Sanitizer ZT™ Complex

Other Means of Identification

Synonyms

Varigard Hand Sanitizer

Scientific Name

Topical Complex Formulated as an Ethanol Alcohol, Crypto Biotic Visco Elastomeric Polymer Topical Solution

Recommended Use

Recommended Use: ZT-PC is an Alginate Polymer based solution complex that is formulated for use with High Purity Ethanol Alcohol as the primary sterilant and Active Ingredient as a Hand Sanitizer with Enhanced Attributes.

Details of the Supplier of the Safety Data Sheet

Supplier Name: Varigard, LLC

Supplier Address: 428 East Section Avenue, Foley, AL 36535, USA

Supplier Phone Number & E-mail: 1-251-263-6975
info@varigard.com

Emergency Telephone Number 1-251-263-6975

2. HAZARDS IDENTIFICATION

ETHYL ALCOHOL (ETHANOL)

CAS NUMBER: 64-17-5 1000 ppm OSHA-TA 1000 ppm 1000 ppm

Neither this compound nor any of its ingredients are listed by OSHA, NTP, or IARC as a carcinogen or potential carcinogen nor do they have established OSHA PELs or ACGIH TLVs, except as listed above.

SYMBOL OF DANGER: Flammable Class 3

SIGNAL WORD: See Section 5 (Fire)

DANGER STATEMENT: This Product Is formulated to minimize fire hazards and has enhanced properties to lower the flashpoint of alcohol below 70% concentration in ambient temperatures under the recommended storage conditions specified below. Regardless of the product's enhanced attributes, all of the fire code regulations under the Class 3 rating must be followed.

Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat, sparks, flames, and other sources of ignition (i.e., pilot lights, electric motors, and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with federal, state, and local regulations.

STATEMENT OF PRECAUTIONS: This product contains denatured ethanol alcohol and is not for consumption or internal use. Topical use for the hands only. Keep away from children.

ZT™ Complex -Crypto Biotic Visco Elastomeric Polymer Topical Solution

CAS NUMBER: CAS 9012-36-6 (AGAROSE)

HS CODE: 3913.90.90

NON -HAZARD CLASSIFICATION: ZT-PC is not classified as hazardous according to applicable criteria of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and the OSHA Hazard Communication Regulations (29 CFR 1910.1200). Neither this compound nor any of its ingredients are listed by OSHA, NTP, or IARC as a carcinogen or potential carcinogen nor do they have established OSHA PELs or ACGIH TLVs.

SYMBOL OF DANGER: Not Applicable

SIGNAL WORD: Not Applicable

DANGER STATEMENT: Not Applicable

STATEMENT OF PRECAUTIONS: Not for internal use. Use as instructed for topical use on the hands only

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL COMPOSITION:

ETHYL ALCOHOL (ETHANOL) CAS NO. 64-17-5 1000 ppm

62% OSHA-TA 1000 ppm 1000 ppm

Boiling Point: 176 ° F

Specific Gravity (H₂O = 1): .886

Vapor Pressure (mm Hg): 40

Melting Point: N/A

Vapor Density (AIR = 1): >1

Evaporation Rate (Butyl Acetate = 1): >1

Solubility in Water: Complete

Appearance and Odor: Clear Color, Alcohol Odor Section

FORMULATED IN A TOPICAL COMPLEX ZT VISCO ELASTOMERIC POLYMER COMPLEX: CAS 9012-36-6, Agarose (kPa) for gel made from High-G Alginate at 07% Concentration. 01% Alginate: CAS 9005-32-7, 01% Glycerine ,01% H₂O₂

WATER: at 25% CAS 7732-18-5 (H₂O) Purified DI

4. FIRST AID MEASURES

Main Symptoms and Acute Effects: No known main symptoms or acute effects. The ZT-Polymer Topical Complex combined with water is classified to be non-hazardous and does not cause any adverse health effects when used and handled according to specifications.

Exposure to Primary Active Ingredient Ethanol Alcohol: Signs and symptoms of exposure include mild eye irritation. Medical conditions generally aggravated by exposure: no medical conditions are known to be aggravated by this product.

In Case of Eye Contact: Immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower lids occasionally. Remove contact lenses, if worn. Get medical attention if required.

In Case of Ingestion: Do NOT induce vomiting. Give victim a glass of water. Call a physician if required. Never give anything by mouth to an unconscious person.

In Case of Inhalation or Suspicion of Inhalation: Immediately move patient to fresh air and call a physician if required.

5. FIRE FIGHTING MEASURES

ZT™ Complex -Crypto Biotic Visco Elastomeric Polymer Topical Solution

CAS NUMBER: CAS 9012-36-6 (AGAROSE)

FLAMMABILITY: Not flammable or combustible. Commonly used as an additive for fire suppression

EXTINGUISHING METHODS: Not required

DANGEROUS PRODUCTS: Does not free dangerous products during a fire

FIRE FIGHTING EQUIPMENT: Polymer does not pose fire hazards. However, a self-contained breathing apparatus is recommended to limit exposure to combustible products when fighting any fire.

ETHYL ALCOHOL (ETHANOL)

CAS NUMBER 64-17-5 1000 ppm 62% OSHA-TA 1000 ppm 1000 ppm

FLAMMABILITY: Class 3 Flammable and Combustible

EXTINGUISHING METHODS:

Suitable Extinguishing Media: Dry chemical; Carbon dioxide (CO₂); Water spray; Alcohol resistant foam.

Unsuitable Extinguishing Media: CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical: Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

DANGEROUS PRODUCTS: Does not free dangerous products during a fire.

6. ACCIDENTAL SPILL MEASURES

PROCEDURES FOR ACCIDENTAL SPILL: Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Ventilate the area. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches, and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

HANDLING: Before using this product, read the Safety Data Sheet. Use the indicated concentrations in designated areas with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material. Keep tightly closed when not in use. Do not get in eyes, on skin or on clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release into the environment. Wash hands after handling the product. Treat with absorbing agents and handle absorbing agents in accordance with applicable regulations. Rinse spill area with water. Large spills should be handled according to a predetermined plan. All waste and containers should be disposed of in accordance with local, state, and federal regulations.

CONDITIONS FOR SAFE STORAGE: To comply with proper storage conditions, keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, and static electricity). All storage in bulk or smaller vessels must be kept in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with all applicable national, state, and local regulations.

INSTRUCTIONS FOR USE: It is a violation of Federal law to use this product in a manner inconsistent with its labeling and SDS.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT AND BIOLOGICAL VALUE LIMIT: No level established.

ZT-PC is classified non-hazardous, however it is recommended that appropriate personal protective equipment, including gloves and respiratory protective, be used while handling the Polymer.

Appropriate Engineering Controls

Showers; Eyewash stations; Ventilation systems

APPROPRIATE PRECAUTIONS:

EYE PROTECTION: The use of safety glasses is recommended.

SKIN PROTECTION: The use of gloves is recommended.

RESPIRATORY PROTECTION: The use of respiratory protection is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Translucent viscous

PHYSICAL STATE: Liquid viscous

ASPECT: Opaque

CHANGES IN APPEARANCE: Possible

COLOR: Without any particular color

ODOR THRESHOLD: Not determined

MOLECULAR WEIGHT: 24.8

pH: 6.5 -7.5 (ASTM D 1293-95)

BOILING POINT: 79.4°C (174.04°F)

MELTING POINT: Not determined

FLASHPOINT: 22.2°C (72.04°F)

Notation: The flash point and evaporation rate will be altered by an order of magnitude relative to the atmospheric conditions and moisture content of the complex and the viscous nature of the polymer complex acting as a fire suppression rheology agent. This product is formulated to minimize fire hazards and has enhanced properties to lower the flashpoint of alcohol below 70% concentrations in ambient temperatures under the recommended storage conditions specified in this SDS. Regardless of the product's enhanced attributes, this product must be considered flammable and all applicable fire code regulations under the Class 3 rating must be adhered to.

EVAPORATION RATE: Undetermined

FLAMMABILITY: Class 3

FLAMMABLE LIMITS: Applicable Laws

DANGER OF EXPLOSION: Is not explosive under normal storage conditions

VAPOR PRESSURE: Not Applicable

VAPOR DENSITY: Not Applicable

DENSITY IN FLUIDS: 1.1 Kg/Lt. (9.2 Lbs./Gallon)

SOLUBILITY (IES): Soluble in water (0.1 a 1.0%)

DECOMPOSITION TEMPERATURE: 426.7°C (800°F) Due to Polymer Complex

Cps VISCOSITY: Medium

SPECIFIC GRAVITY: (H₂O = 1.0): 2.61

10. STABILITY AND REACTIVITY

ZT™ Complex -Crypto Biotic Visco Elastomeric Polymer Topical Solution

CAS NUMBER: CAS 9012-36-6 (AGAROSE)

REACTIVITY: No reaction in its intrinsic form

CHEMICAL STABILITY: Chemically stable in its intrinsic form

CONDITIONS TO AVOID: Keep away from acids.

INCOMPATIBILITIES: Due to the condition of alkalinity, the polymer is incompatible with acids and ammonium salts.

DECOMPOSITION PRODUCTS: Decomposition does not occur spontaneously.

ETHYL ALCOHOL (ETHANOL)

CAS NUMBER: 64-17-5 1000 ppm 62% OSHA-TA 1000 ppm 1000 ppm

REACTIVITY : None under normal use conditions.

CHEMICAL STABILITY: Stable under normal conditions.

INCOMPATIBILITIES : Flammable Class 3. Incompatible with high concentrations of oxidizing agents.

POSSIBILITY OF HAZARDOUS REACTIONS: None under normal processing.

CONDITIONS TO AVOID: Heat, flames, sparks, and extreme pressurization with ignition.

DECOMPOSITION PRODUCTS: None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

ZT™ Complex -Crypto Biotic Visco Elastomeric Polymer Topical Solution

CAS NUMBER: CAS 9012-36-6 (AGAROSE)

MAIN SYMPTONS AND ACUTE EFFECTS: Not Applicable.

ACUTE ORAL EFFECTS: No known acute effects.

ACUTE SKIN EFFECTS: No known acute effects.

CARCINOGENICITY: Contains no reportable quantities of ingredients listed as carcinogens.

EFFECTS ON ORGANS: No known effects on organs.

ENDOCRINE EFFECTS: No known effects on the endocrine system.

Based on experience and the information available, the polymer does not cause any adverse health effects when used and handled according to specifications. The product is not classified as toxic.

ETHYL ALCOHOL (ETHANOL)

CAS NUMBER: 64-17-5 1000 ppm 62% OSHA-TA 1000 ppm 1000 ppm

Information on likely routes of exposure:

INHALATION: Specific test data for the substance or mixture is not available. Vapors may be irritating to eyes, nose, throat, and lungs.

EYE CONTACT: Specific test data for the substance or mixture is not available. May cause redness, itching, and pain.

SKIN CONTACT: Specific test data for the substance or mixture is not available. May cause irritation.

INGESTION: Specific test data for the substance or mixture is not available. May cause gastrointestinal discomfort if consumed in large amounts.

Symptoms related to the physical, chemical and toxicological characteristics:**SYMPTOMS:** May cause redness and tearing of the eyes. May cause skin irritation in susceptible persons.**ACUTE TOXICITY:** Delayed and immediate effects as well as chronic effects from short and long-term exposure**SKIN CORROSION/IRRITATION:** May cause mild to moderate irritation.**CARCINOGENICITY:** Ethanol has been shown to be carcinogenic in long-term studies only when consumed as an alcoholic beverage.**12. ECOLOGICAL INFORMATION****ECOTOXICITY:** No known toxicity for plants or animals.**PERSISTENCE:** Not Applicable**DEGRADABILITY:** Not Applicable**BIOACCUMULATIVE POTENTIAL:** Not Applicable**MOBILITY IN SOIL:** Not Applicable**13. DISPOSAL CONSIDERATIONS**

The Contents of this formulation in both the complex and active ingredients is not considered hazardous waste. However, the waste and container must be disposed of in accordance with all applicable regulations.

14. TRANSPORTATION INFORMATION**NUMBER ONE (ADR, ADN, IMDG, IATA, RID):** Not Applicable**OFFICIAL DESIGNATION OF TRANSPORTATION OF THE UNITED NATIONS (ADR, ADN, IMDG, IATA, RID):** Not Applicable**CLASS (ES) OF HAZARDS IN TRANSPORT (ADR, ADN, IMDG, IATA, RID):** Not Applicable**PACKING / PACKAGING (ADR, ADN, IMDG, IATA, RID):** Not Applicable**ENVIRONMENTAL HAZARDS:** Not Applicable**MARINE POLLUTANT:** No**BULK TRANSPORT (ACCORDING TO ANNEX II OF MARPOL 73/78 CONVENTION AND THE IBC CODE):** Not Applicable**SPECIAL PRECAUTIONS:** Not Applicable**IBC CODE:** 31HA1**HAZARDOUS SUBSTANCE / AMOUNTS LIKELY TO BE REPORTED (RQ):** Not Applicable**TOXIC SUBSTANCES CONTROL ACT (TSCA):** ZT-PCS is exempt under the TSCA act**ADDITIONAL DATA:** ZT-PC is not considered dangerous according to the regulations of US Department of Transportation (US DOT).

NFPA RATING SYMBOL:**HEALTH: 0****FIRE:****REACTIVITY: 0****15. REGULATORY INFORMATION**

REGULATION OF HAZARD COMMUNICATION-USDOL-OSHA 29 CFR 1910.1200: According to these regulations, the polymer is considered a "non-hazardous chemical" for transportation and storage, but, must be part of any hazard communication because of its potential to be caustic when hydrated or catalyzed. The Ethanol Content requires special attention to all applicable fire codes including international regulatory guidelines for product handling and transportation.

16. OTHER INFORMATION

The information contained herein is deemed reliable. However, this safety data sheet shall not constitute any specific product warranty or generate any contractual or other legal relationship. The manufacturer is not liable for damage to persons or property arising from its use. Nothing herein shall be construed as a recommendation for use in violation of any patent.

MANUFACTURER: Varigard, LLC

ADDRESS: 428 East Section Avenue, Foley, AL 36535

EMERGENCY TELEPHONE (USA): 1-251-263-6975

This Safety Data Sheet is issued by Varigard, LLC, in accordance with the laws of the United States for the manufacture, distribution, and use of ZT-PC polymer formulated as an additive. As such, the information in this document should not be altered or removed. This SDS was issued on August 31, 2020 and will be updated if/when a change is registered in any of the product specifications, guidelines and/or regulations. Varigard, LLC hereby disclaims responsibility for any change made to this document by an unauthorized person or organization.

The information provided in this SDS provides a useful summary of the behavior of ZT-PC polymer formulated as additive for non-toxic hand sanitizers with ethanol alcohol, as well as when used in its intrinsic form. However, this document can not anticipate and provide all information that might be needed for each situation. Inexperienced users of the Topical Complex should receive proper training before using this product. In particular, the data provided in this sheet does not address the risks associated with mixing the ZT-PC polymer formulate complex solutions with other chemicals.

It is the responsibility of the user to investigate and understand other pertinent sources of information in order to comply with all laws and procedures applicable to the handling and use of products and to determine the suitability of the intended use.

- END OF SAFETY DATA SHEET -