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## 1. PRODUCT IDENTIFICATION

PRODUCT NAME: Alcohol Antiseptic 80% Topical Solution; Hand Sanitizer  
CHEMICAL FORMULA: C<sub>2</sub>H<sub>5</sub>OH  
C.A.S. Number: 64175  
SYNONYMS: Ethanol, Grain Alcohol, 190-Proof Alcohol  
D.O.T. SHIPPING DESCRIPTION: Ethyl Alcohol, Flammable Liquid, UN1170

## 2. HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

COMPONENT: Ethyl Alcohol 80%  
OSHA PEL: 1000 ppm (1900 mg/m<sup>3</sup>)  
ACGIH TLV: 1000 ppm (1900 mg/m<sup>3</sup>)

NFPA Hazard Identification:  
HEALTH = 1  
FIRE = 3  
REACTIVITY = 0

National Fire Protection Association(NFPA) Legend:  
4=Extreme  
3=Serious  
2=Moderate  
1=Slight  
0=Minimal

### PRECAUTIONARY MEASURES:

**WARNING! FLAMMABLE! HARMFUL IF SWALLOWED OR INHALED.**  
**CAUSES EYE IRRITATION.**

Due to the ethyl alcohol content, this product is flammable in large quantities.  
Keep away from heat, sparks, flame or oxidants.  
Avoid breathing vapor.

## 3. PHYSICAL DATA / CHEMICAL CHARACTERISTICS

BOILING POINT: 172.4°F (78°C);  
VAPOR PRESSURE: 44.6 mmHg @ 68°F (20°C);  
PERCENT VOLATILE BY VOLUME: 99.9+  
VAPOR DENSITY: (Air = 1): 1.6;  
EVAPORATION RATE: (CCl<sub>4</sub> = 1): 1.4  
SOLUBILITY IN WATER: Complete.  
APPEARANCE AND ODOR: Clear, colorless, volatile liquid with alcoholic odor.

#### 4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 57.2°F (14°C) TCC

FLAMMABLE (EXPLOSIVE) LIMITS IN AIR (% BY VOLUME): Lower 3.3; Upper 19.0

AUTOIGNITION TEMPERATURE: 685.4°F (363°C)

OSHA CLASS: 1B Flammable Liquid

FIRE EXTINGUISHING MEDIA: Dry Chemical, foam or carbon dioxide. Water spray may be used to keep fire-exposed containers cool. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

SPECIAL FIRE-FIGHTING PROCEDURES: Do not use ordinary foam; Do not breathe fumes; Avoid eye and skin contact; Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Vapors can flow along surfaces to distant ignition source and flash back. Containers may rupture violently in fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Alcohols can react vigorously with oxidizers.

#### 5. REACTIVITY DATA:

STABILITY: Stable

CONDITIONS TO AVOID: Keep away from heat, sparks, flames

INCOMPATIBILITY (MATERIALS TO AVOID): Capable of reacting vigorously with oxidizing agents, such as nitrates, perchlorates, peroxides, sulfuric acid, nitric acid, etc.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide (CO<sub>2</sub>) and Carbon Monoxide (CO).

HAZARDOUS POLYMERIZATION: Will not occur.

#### 6. HEALTH HAZARD DATA

ACGIH THRESHOLD LIMIT VALUE: 1000 ppm (1880 mg/m<sup>3</sup>)

PRIMARY ROUTES OF EXPOSURE: Skin Contact; Skin absorption; Inhalation

SIGNS / SYMPTOMS OF EXPOSURE:

ACUTE: Exposure to ethyl alcohol vapors in excess of 1000 ppm in air may cause headache and irritation of the eyes, nose and throat. Prolonged exposure may cause symptoms of alcohol intoxication, drowsiness, weakness, loss of appetite, and inability to concentrate. Exposure to very high concentrations may cause symptoms of alcohol intoxication, headache, drowsiness, tremors, fatigue, dizziness, and unconsciousness. Ingestion of 190 proof ethyl alcohol produces the typical effects of alcohol intoxication. Ingestion of very large doses can cause alcohol poisoning and death. Contact of liquid ethyl alcohol with the skin may cause drying and cracking due to defatting of the tissue.

CHRONIC: Repeated, prolonged skin contact can cause drying and cracking of the skin and possible dermatitis.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Skin, eyes, liver, respiratory system, central nervous system.

#### EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush thoroughly with running water for at least 15 minutes, including under eyelids. Get medical attention.

SKIN CONTACT: Flush area with water. Remove contaminated clothing. Get medical attention if irritation persists after flushing.

INHALATION: Remove to fresh air. Restore and/or support breathing as required. Get medical attention.

INGESTION: If victim is conscious and less than 2 hours have elapsed since ingestion, administer large quantities of water and induce vomiting or gastric lavage. Do not make an unconscious person vomit. Get medical attention immediately.

## 8. SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS: Local exhaust to maintain concentration of alcohol vapors below 1000 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY: NIOSH approved respirator for organic vapors if ventilation is not adequate. For unknown concentrations, fire fighting, or high concentrations, use a self-contained breathing apparatus (SCBA) with full face piece.

EYE: Face shield, chemical safety goggles or safety glasses with side shields.

GLOVES: Butyl rubber, natural rubber, neoprene, nitrile rubber, polyethylene, Viton, or other compatible material.

OTHER: Appropriate protective clothing for the work situation to minimize skin contact. Eyewash stations and safety showers should be available in areas of handling and use.

## 9. SPECIAL PRECAUTIONS

Store in tightly closed containers. Store in cool, dry, well-ventilated, fire resistant areas. Store out of direct sunlight, away from oxidizing agents and sources of heat or ignition. Electrically bond and ground metal containers during liquid transfer.

## 10. SPILL, LEAK AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Restrict access to area. Keep unprotected personnel upwind of spill.

Remove sources of heat, sparks, and flames.

Provide adequate ventilation.

Contain spill.

Prevent liquid from entering sewers and confined spaces.

Use non-sparking tools and equipment.

Follow federal, state, and local requirements for reporting spills and releases.

**SMALL SPILLS**: Absorb with sand or other suitable material; transfer to suitable disposal container. Flush area with water.

**LARGE SPILLS**: Dike far ahead of spill. Use water spray to reduce vapors and decrease fire hazard. Pick up liquid for recovery or disposal when feasible. Absorb residues with sand or other suitable material; transfer to suitable disposal containers.

**DISPOSAL**: Follow federal, state and local disposal requirements. Waste residues and liquids may be an ignitable hazardous waste.