



VI·JON[®] Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Original Hand Sanitizer
Item Number: 545AD/545AE
Recommended Use: Personal Care
Supplier Address: Vi-Jon, Inc.
8515 Page Avenue
Saint Louis, MO 63114

General Information Contact: Phone: 314-427-1000 (M-F 8am-4pm CST)
Email: info@vijon.com

In Case of Spill Emergency Contact: Chemtrec: 1-800-424-9300 (24-Hour)
Contract #: 23848

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Flammable liquid
May cause eye irritation
May cause central nervous system depression

Appearance: Clear to slightly hazy, colorless

Physical State: Viscous liquid

Odor: Alcohol/sweet, floral

Potential Health Effects

Primary Routes of Exposure

Eye contact. Skin contact.

Acute Toxicity

Eyes

May cause irritation.

Skin

Prolonged skin contact may defat the skin and produce dermatitis.

Inhalation

Inhalation of vapors in high concentration may cause irritation of respiratory system.

Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.

Chronic Effects

Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Aggravated Medical Conditions

Central nervous system. Pre-existing eye disorders. Blood disorders. Liver disorders. Overexposure may cause female and male reproductive disorder(s). Skin disorders. Respiratory disorders. Reproductive toxicity.

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

Environmental Hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Ethyl Alcohol	64-17-5	50-100
Benzophenone-4	4065-45-6	0-10
Carbomer	76050-42-5	0-10
Fragrance	Fragrance	0-10
Glycerin	56-81-5	0-10
Isopropyl Myristate	110-27-0	0-10
Propylene Glycol	57-55-6	0-10
Tocopheryl Acetate	58-95-7	0-10
Water	7732-18-5	10-50
Diisopropylamine	108-18-9	0-10
t-Butyl Alcohol	75-65-0	0-10
Denatonium Benzoate	3734-33-6	0-10

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin Contact	Wash skin with soap and water. If symptoms persist, call a physician.
Inhalation	Move victim to fresh air. If symptoms persist, call a physician.
Ingestion	Rinse mouth. Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Containers may explode when heated. Many liquids are lighter than water.
Flash Point	21.6 C / 71 F
Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or alcohol-resistant foam. Water spray, fog or alcohol-resistant foam Use water spray or fog; do not use straight streams.
Uniform Fire Code	• Flammable Liquid: I-B
Unsuitable Extinguishing Media	CAUTION: All these products have a very low flash point. Use of water spray when fighting fire may be inefficient.
Hazardous Combustion Products	Carbon oxides.
Explosion Data	
Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	Yes.

Specific Hazards Arising from the Chemical

Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

Protective Equipment and Precautions for Firefighters

Move containers from fire area if you can do it without risk. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA **Health Hazard** 1 **Flammability** 3 **Stability** 0 **Physical and Chemical Hazards** – None known.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas.
Methods for Containment Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other noncombustible absorbent material. Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.
Other Information Water spray may reduce vapor; but may not prevent ignition in closed spaces.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with eyes.
Storage Keep in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl Alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³
Glycerin 56-81-5	TWA: 10 mg/m ³ mist	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	
Diisopropylamine 108-18-9	TWA: 5 ppm S*	TWA: 5 ppm TWA: 20 mg/m ³ (vacated) TWA: 5 ppm (vacated) TWA: 20 mg/m ³ (vacated) S*	IDLH: 200 ppm TWA: 5 ppm TWA: 20 mg/m ³
t-Butyl Alcohol 75-65-0	TWA: 100 ppm	TWA: 100 ppm TWA: 300 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 300 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 450 mg/m ³	IDLH: 1600 ppm TWA: 100 ppm TWA: 300 mg/m ³ STEL: 150 ppm STEL: 450 mg/m ³

Immediately Dangerous to Life or Health. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH:

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures Showers
 Eyewash stations
 Ventilation systems

Personal Protective Equipment

Eye/Face Protection
Skin and Body Protection
Respiratory Protection

No special protective equipment required.
 No special protective equipment required.
 No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to slightly hazy, colorless	Odor	Alcohol/sweet, floral
Odor Threshold	No information available.	Physical State	Viscous liquid
pH	No information available	Autoignition Temperature	No information available
Flash Point	71 F / 21.6 C	Boiling Point/Range	No information available
Decomposition Temperature	No information available	Explosion Limits	No information available
Melting Point/Range	No information available	Solubility	No information available
Flammability Limits in Air	No information available	Vapor Pressure	No data available
Water Solubility	Soluble in water.	VOC Content (%)	59.1206
Evaporation Rate	No information available		
Vapor Density	No data available		
Partition Coefficient: n-octanol/water	No information available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Strong oxidizing agents.
Conditions to Avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Carbon oxides.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

LD50 Oral VALUE	11914.85 mg/kg (rat) estimated
LD50 Dermal VALUE	4539237 mg/kg (rat) estimated
LC50 Inhalation (DUST) VALUE	12899.23 mg/L (mist) (dust) mg/m ³ estimated
LC50 Inhalation (VAPOR) VALUE	

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl Alcohol	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Benzophenone-4	3530 mg/kg (Rat)	-	-
Glycerin	= 12600 mg/kg (Rat)	> 21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h
Isopropyl Myristate	> 10000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	41 mg/l (Rat) 1 h
Propylene Glycol	= 20000 mg/kg (Rat)	= 20800 mg/kg (Rabbit)	-
Water	90090 mg/kg (rat)	-	-
Diisopropylamine	= 420 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 5.3 mg/L (Rat) 4 h
t-Butyl Alcohol	= 2733 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 9700 ppm (Rat) 4 h
Denatonium Benzoate	= 584 mg/kg (Rat)	-	-

Chronic Toxicity

Chronic Toxicity	Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.
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Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl Alcohol	A3	Group 1	Known	X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Target Organ Effects

Blood. Central nervous system (CNS). Eyes. Liver. Reproductive system. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethyl Alcohol		LC50: 12.0 - 16.0 mL/L (96 h static) <i>Oncorhynchus mykiss</i> LC50: 13400 - 15100 mg/L (96 h flow-through) <i>Pimephales promelas</i> LC50: > 100 mg/L (96 h static) <i>Pimephales promelas</i>	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50: 9268 - 14221 mg/L (48 h) <i>Daphnia magna</i> EC50: 10800 mg/L (24 h) <i>Daphnia magna</i> EC50: 2 mg/L (48 h Static) <i>Daphnia magna</i>
Glycerin		LC50: 51 - 57 mL/L (96 h static) <i>Oncorhynchus mykiss</i>		EC50: > 500 mg/L (24 h) <i>Daphnia magna</i>
Isopropyl Myristate	EC50: > 100 mg/L (72 h) <i>Desmodesmus subspicatus</i>	LC50: 8400 mg/L (96 h) <i>Brachydanio rerio</i> LC50: 8400 mg/L (96 h semi-static) <i>Brachydanio rerio</i>		EC50: 100 mg/L (48 h) <i>Daphnia magna</i>
Propylene Glycol	EC50: 19000 mg/L (96 h) <i>Pseudokirchneriella subcapitata</i>	LC50: 51600 mg/L (96 h static) <i>Oncorhynchus mykiss</i> LC50: 41 - 47 mL/L (96 h static) <i>Oncorhynchus mykiss</i> LC50: 710 mg/L (96 h) <i>Pimephales promelas</i> LC50: 51400 mg/L (96 h static) <i>Pimephales promelas</i>		EC50: > 1000 mg/L (48 h Static) <i>Daphnia magna</i> EC50: > 10000 mg/L (24 h) <i>Daphnia magna</i>
Diisopropylamine	EC50: 20 mg/L (96 h) <i>Pseudokirchneriella subcapitata</i> EC50: 20 mg/L (96 h static) <i>Pseudokirchneriella subcapitata</i>	LC50: 420-560 mg/L (96 h semi-static) <i>Oryzias latipes</i> LC50: 37 mg/L (96 h) <i>Oncorhynchus mykiss</i> LC50: 150-223 mg/L (96 h semi-static) <i>Brachydanio rerio</i> LC50: 1000 mg/L (96 h semi-static) <i>Poecilia reticulata</i>		EC50: 25.8 mg/L (24 h) <i>Daphnia magna</i>
t-Butyl Alcohol	EC50: > 1000 mg/L (72 h) <i>Desmodesmus subspicatus</i>	LC50: 6130-6700 mg/L (96 h flow-through) <i>Pimephales promelas</i>	EC50 > 10000 mg/L 17 h	EC50: 4607 - 6577 mg/L (48 h Static) <i>Daphnia magna</i> EC50: 933 mg/L (48 h) <i>Daphnia magna</i>

Chemical Name	Log Pow
Ethyl Alcohol	-0.32
Glycerin	-1.76
Isopropyl Myristate	6.006
Propylene Glycol	-0.32
t-Butyl Alcohol	0.35

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Dispose of in accordance with local regulations.

US EPA Waste Number D001

California Hazardous Waste Codes 331

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California EHW	California Carc	California Hazardous Waste	California Waste - Part 2
Ethyl Alcohol			Toxic Ignitable	Recyclable Hazardous Wastes

14. TRANSPORT INFORMATION

DOT

Description Consumer commodity, ORM-D
If not ORM-D, UN1170, Ethanol Solution, 3, PG III
Emergency Response Guide Number 127

TDG

Description UN1170,ETHANOL,3,PG III

MEX

Description UN1170 Ethanol,3,III

ICAO

Description 1170,Ethanol solution,3,PG III

IATA

Description UN1170,Ethanol solution,3,PG III

IMDG/IMO

Description 1170, Ethanol,3,PG III, FP 21.6C

Product Number: 545AD/545AE
Issuing Date: November 18, 2011

Revision Date: None

Product Name: Original Hand Sanitizer
Revision Number: 0

15. REGULATORY INFORMATION

International Inventories

TSCA Exempt
DSL Does not Comply

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
t-Butyl Alcohol	75-65-0	0-0.1	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard Yes
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Glycerin	56-81-5	0-10		Group II		
Propylene Glycol	57-55-6	0-0.05		Group I		

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

Ethyl alcohol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Ethyl Alcohol	64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethyl Alcohol	X				X
Glycerin	X	X	X		X
Diisopropylamine	X	X	X		X

International Regulations

Mexico - Grade Minimum risk, Grade 0

Chemical Name	Carcinogen Status	Exposure Limits
Ethyl Alcohol		Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m ³
Glycerin		Mexico: TWA 10 mg/m ³
Diisopropylamine		Mexico: TWA 5 ppm Mexico: TWA 20 mg/m ³

Canada

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

WHMIS Hazard Class

B2 Flammable liquid

D2B Toxic materials



16. OTHER INFORMATION

Issuing Date November 18, 2011

Revision Date None

Revision Note None

MSDS Prepared by WERCS Professional Services, LLC

General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

Approved and Updated by Vi-Jon, Inc.

Disclaimer:

The information and recommendations contained in the Material Safety Data Sheet (MSDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

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End of Safety Data Sheet