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

| Product identifier | | |
|---------------------------------------|---|--|
| Product Name | 456AB 70% Alcohol Foaming Hand Sanitizer | |
| Other means of identification | | |
| Synonyms | None | |
| Recommended use of the chemical | and restrictions on use | |
| Recommended Use | Hand sanitizer | |
| Uses advised against | No information available | |
| Details of the supplier of the safety | data sheet | |
| Supplier Name | Vi-Jon Inc. | |
| Supplier Address | Vi-Jon Inc. 8800 Page Avenue Saint Louis MO 63114 US | |
| Supplier Phone Number | Phone: 314-427-1000 (M-F 8am-4pm CST) Fax:3144271010 | |
| Supplier Email | info@vijon.com | |
| Emergency telephone number | Chemtrec: 1-800-424-9300 (24-Hour) | |



Category 2

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Flammable liquids

GHS Label elements, including precautionary statements

| | Emergency Overview | | |
|--|--------------------------------------|-------|---------|
| Signal word: | Danger | | |
| Highly flammable liquid and vapor | | | |
| | | | |
| Appearance: Clear to Slightly Haz Colorless, Water-Thin Liquid | v, Physical state: Water-Thin Liquid | Odor: | Alcohol |

Precautionary Statements - Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking Keep container tightly closed Ground/bond container and receiving equipment Use explosion-proof electrical/ ventilating/ lighting/ equipment Use only non-sparking tools Take precautionary measures against static discharge Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC) Not applicable

<u>Unknown Toxicity</u>

0 % of the mixture consists of ingredient(s) of unknown toxicity

Other information

Toxic to aquatic life PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION May cause slight eye irritation

Interactions with Other Chemicals

None known.



3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% | Trade Secret |
|----------------------------|------------|----------|--------------|
| Ethyl Alcohol 70% v/v | 64-17-5 | 50 - 100 | * |
| Water | 7732-18-5 | 10 - 50 | * |
| PEG-12 Dimethicone | 68937-54-2 | 0 - 10 | * |
| Glyceryl Caprylate/Caprate | 91744-32-0 | 0 - 10 | * |
| Glycerin | 56-81-5 | 0 - 10 | * |
| sopropyl Myristate | 110-27-0 | 0 - 10 | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

| <u>First</u> | aid | measures | |
|--------------|-----|----------|--|
| | | | |

| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. |
|------------------------------------|--|
| Skin contact | If skin irritation or allergic reactions occur, see a physician. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen. |
| Ingestion | Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. |
| Self-protection of the first aider | Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. Wear personal protective clothing (see section 8). |

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and No information available.

Effects

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. 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.

Uniform Fire Code

Flammable Liquid: I-B

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.



| | 6. ACCIDENTAL RELEASE MEASURES | |
|------------------------------------|---|--|
| Personal precautions, protective | equipment and emergency procedures | |
| Personal precautions | Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. 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. | |
| Other Information | Ventilate the area. | |
| Environmental precautions | | |
| Environmental precautions | Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. | |
| Methods and material for contain | ment and cleaning up | |
| Methods for containment | Prevent further leakage or spillage if safe to do so. 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. | |
| Methods for cleaning up | 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 | |
| Precautions for safe handling | | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat/sparks/open flames/hot surfaces No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. | |
| Conditions for safe storage, inclu | iding any incompatibilities | |
| Storage | 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). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. | |
| Incompatible Products | None known based on information supplied. | |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

There is no exposure data pertaining to the Product. This section reflects exposure data pertaining to individual ingredients.

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-----------------------|--------------------------------|---|-----------------------------|
| Ethyl Alcohol 70% v/v | STEL: 1000 ppm | TWA: 1000 ppm | IDLH: 3300 ppm 10% LEL |
| 64-17-5 | | TWA: 1900 mg/m ³ | TWA: 1000 ppm |
| | | (vacated) TWA: 1000 ppm | TWA: 1900 mg/m ³ |
| | | (vacated) TWA: 1900 mg/m ³ | - |
| Glycerin | TWA: 10 mg/m ³ mist | TWA: 15 mg/m ³ mist, total particulate | |
| 56-81-5 | | 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 | |

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

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

Appropriate engineering controls

| Engineering Measures | Showers Eyewash stations Ventilation systems |
|------------------------------------|---|
| Individual protection measures, su | ch as personal protective equipment |
| Eye/face protection | Tight sealing safety goggles. |
| Skin and body protection | Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves. Antistatic boots. |
| Respiratory protection | 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. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical and Chemical Properties | | | |
|-------------------------------------|---|----------------|--------------------------|
| Physical state | Water-Thin Liquid | | |
| Appearance | Clear to Slightly Hazy, Colorless, Water-Thin Liquid | Odor | Alcohol |
| Color | Colorless | Odor Threshold | No information available |
| Property | Values | Remarks Method | |
| рН | UNKNOWN | None known | |
| Melting / freezing point | No data available | None known | |
| Boiling point / boiling range | No data available | None known | |
| Flash Point | 22 C / 72 F | None known | |
| Evaporation Rate | No data available | None known | |
| Flammability (solid, gas) | No data available | None known | |
| Flammability Limit in Air | | | |
| Upper flammability limit | No data available | | |
| Lower flammability limit | No data available | | |
| Vapor pressure | No data available | None known | |
| Vapor density | No data available | None known | |
| Specific Gravity | 0.879 | None known | |
| Water Solubility | Miscible in water | None known | |
| Solubility in other solvents | No data available | None known | |
| Partition coefficient: n-octanol/wa | iterNo data available | None known | |
| Autoignition temperature | No data available | None known | |
| Decomposition temperature | No data available | None known | |
| Kinematic viscosity | No data available | None known | |
| Dynamic viscosity | No data available | None known | |
| Explosive properties | No data available | | |
| Oxidizing properties | No data available | | |
| Other Information | | | |
| Softening Point | No data available | | |
| VOC Content (%) | No data available | | |
| Particle Size | No data available | | |
| Particle Size Distribution | No data available | | |
| | 10. STABILITY AND RE | ACTIVITY | |

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials None known.

Hazardous Decomposition Products Carbon Oxides When used in accordance with the directions.



11. TOXICOLOGICAL INFORMATION

There is no data for this product. The information included in this section describes the potential hazards of the individual ingredients.

Information on likely routes of exposure

| Product Information | |
|---------------------|---|
| Inhalation | Specific test data for the substance or mixture is not available. |
| Eye contact | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Ingestion | Specific test data for the substance or mixture is not available. |

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|----------------------------------|---------------------|--------------------|-----------------------|
| Ethyl Alcohol 70% v/v 64-17-5 | = 7060 mg/kg (Rat) | - | = 124.7 mg/L (Rat)4 h |
| Water 7732-18-5 | > 90 mL/kg (Rat) | - | - |
| Glycerin 56-81-5 | = 12600 mg/kg (Rat) | > 10 g/kg (Rabbit) | > 570 mg/m³(Rat)1 h |
| Isopropyl Myristate 110-27-0 | > 10000 mg/kg (Rat) | = 5 g/kg (Rabbit) | > 41 mg/L (Rat)1 h |

Information on toxicological effects

| Symptoms |
|----------|
|----------|

No information available.

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization

No information available.

Mutagenic Effects

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen. Ethanol has been shown to be carcinogenic in long-term studies ONLY when consumed as alcoholic beverage.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---------------------------|-----------------------------|------------------------------|-----------|------|
| Ethyl Alcohol 70% v/v | A3 | Group 1 | Known | Х |
| 64-17-5 | | | | |
| ACGIH (American Conf | erence of Governmental Inc | lustrial Hygienists) | | |
| A3 - Animal Carcinogen | | | | |
| IARC (International Age | ency for Research on Cance | er) | | |
| Group 1 - Carcinogenic te | o Humans | | | |
| NTP (National Toxicolog | gy Program) | | | |
| Known - Known Carcinog | gen | | | |
| OSHA (Occupational Sa | afety and Health Administra | tion of the US Department of | of Labor) | |
| X - Present | | | | |
| Reproductive toxicity | No information | on available. | | |

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity No known effect based on information supplied.

No information available.

Target Organ Effects Blood. Central Nervous System (CNS). Eyes. Kidney. Liver. Reproductive System. Respiratory system. Skin.

Aspiration Hazard

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 11,048.00 mg/kg ATEmix (inhalation-dust/mist) 196.90 mg/l



12. ECOLOGICAL INFORMATION

There is no ecological data on the Product. The Product ingredients are expected to be safe for the environment at concentrations predicted under normal use and accidental spill scenarios. Packaging components are compatible with the conventional solid waste management practices.

Ecotoxicity

Toxic to aquatic organisms.

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

| Waste treatment methods | |
|----------------------------------|---|
| Disposal methods | This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). |
| Contaminated Packaging | Dispose of contents/containers in accordance with local regulations. |
| US EPA Waste Number | D001 |
| California Hazardous Waste Codes | 311 |

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

14. TRANSPORT INFORMATION

| DOT | |
|--------------------------|---------------------------|
| Proper Shipping Name | CONSUMER COMMODITY |
| Hazard Class | ORM-D |
| Description | CONSUMER COMMODITY, ORM-D |
| Emergency Response Guide | 127 |
| Number | |
| TDG | |
| UN-No. | UN1170 |
| Proper Shipping Name | ETHANOL |
| Hazard Class | 3 |
| Packing Group | II |
| Description | UN1170, ETHANOL, 3, II |
| MEX | |
| UN-No. | UN1170 |
| Proper Shipping Name | ETHANOL |
| Hazard Class | 3 |
| Packing Group | II |
| Description | UN1170, ETHANOL, 3, II |
| | |
| UN-No. | UN1170 |
| Proper Shipping Name | ETHANOL |
| Hazard Class | 3 |
| Packing Group | II |
| Description | UN1170, ETHANOL, 3, II |
| ΙΑΤΑ | |
| UN-No. | UN1170 |
| Proper Shipping Name | ETHANOL |
| Hazard Class | 3 |
| Packing Group | II |
| Description | UN1170, ETHANOL, 3, II |
| | |



| IMDG/IMO UN-No. Proper Shipping Name Hazard Class Packing Group EmS-No. Description | UN1170 ETHANOL 3 II F-E, S-D UN1170, ETHANOL, 3, II, (22°C C.C.) |
|--|---|
| <u>RID</u> UN-No. Proper Shipping Name Hazard Class Packing Group Classification code Description ADR/RID-Labels | UN1170 ETHANOL 3 II F1 UN1170, ETHANOL, ENVIRONMENTALLY HAZARDOUS, 3, II 3 |
| ADR UN-No. Proper Shipping Name Hazard Class Packing Group Classification code Tunnel restriction code Description | UN1170 ETHANOL 3 II F1 (D/E) UN1170, ETHANOL, ENVIRONMENTALLY HAZARDOUS, 3, II, (D/E) |
| ADN UN-No. Proper Shipping Name Hazard Class Packing Group Classification code Special Provisions Description Hazard Labels Limited Quantity Ventilation | UN1170 ETHANOL 3 II F1 144, 601 UN1170, ETHANOL, ENVIRONMENTALLY HAZARDOUS, 3, II 3 1 L VE01 |

15. REGULATORY INFORMATION

International Inventories

 TSCA
 Complies

 DSL
 All components are listed either on the DSL or NDSL.

 IECSC

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| Acute Health Hazard | No |
|-----------------------------------|-----|
| Chronic Health Hazard | No |
| Fire Hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (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)

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

US State Regulations

California Proposition 65 - NONE

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania | Rhode Island | Illinois |
|----------------------------------|------------|---------------|--------------|--------------|----------|
| Ethyl Alcohol 70% v/v 64-17-5 | X | X | Х | | Х |
| Glycerin 56-81-5 | Х | Х | Х | Х | |

International Regulations

Mexico

National occupational exposure limits

| Chemical name | Carcinogen Status | Exposure Limits |
|-----------------------|-------------------|------------------------------------|
| Ethyl Alcohol 70% v/v | | Mexico: TWA 1000 ppm |
| | | Mexico: TWA 1900 mg/m ³ |
| Glycerin | - | 10mg/m ³ (mist) TWA |

Mexico - Occupational Exposure Limits - Carcinogens

Canada WHMIS Hazard Class Not determined



16. OTHER INFORMATION

| NFPA | Health Hazards 1 Flammability 3 Instability 0 Physical and Chemical Hazards - |
|----------------------|--|
| HMIS | N/A Health Hazards 1 Flammability 3 Physical Hazard 0 Personal Protection X |
| Prepared By | Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501 |
| Issuing Date | May 4, 2016 |
| Revision Date | None |
| Revision Note | None |

General Disclaimer

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Approved and Updated by Vi-Jon, Inc.

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End of Safety Data Sheet