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Product Number: 876
Issuing Date: April 12, 2011

Revision Date: None

Product Name: Ethyl Rubbing Alcohol 70%
Revision Number: 0

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VI-JON® Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ethyl Rubbing Alcohol 70%
Item Number: 876
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)

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

FLAMMABLE LIQUID AND VAPOR
Irritating to eyes
May cause central nervous system depression

Appearance: Clear, colorless

Physical State: Mobile liquid

Odor: Characteristic alcohol

Potential Health Effects

Primary Routes of Exposure

Eye contact. Skin contact. Inhalation.

Acute Toxicity

Eyes
Skin
Inhalation

Ingestion

Irritating to eyes.
May cause irritation.
Inhalation of vapors in high concentration may cause irritation of respiratory system. May be harmful if inhaled.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression. May be harmful if swallowed.

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. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Aggravated Medical Conditions

Central nervous system. Pre-existing eye disorders. Blood disorders. Liver disorders. 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.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Ethyl Alcohol	64-17-5	50-100
Water	7732-18-5	10-50
Acetone	67-64-1	0-10
Denatonium Benzoate	3734-33-6	0-10
Methyl Isobutyl Ketone	108-10-1	0-10

4. FIRST AID MEASURES

General Advice	Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.
Eye Contact	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Skin Contact	Wash skin with soap and water.
Inhalation	Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Ingestion	Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.
Notes to Physician	Keep victim warm and quiet.
Protection of First-aiders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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	20Â°C / 68Â°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 - Irritant: Liquid
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.
<u>Explosion Data</u>	
Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	Yes.

Specific Hazards Arising from the Chemical

Vapors may form explosive mixtures with air. 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). Runoff to sewer may create fire or explosion hazard.

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 2

Flammability 3

Stability 0

Physical and Chemical Hazards – None

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk.
Environmental Precautions	Prevent entry into waterways, sewers, basements or confined areas.
Methods for Containment	A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Methods for Cleaning Up	Dam up. Cover liquid spill with sand, earth or other noncombustible absorbent material. Take up mechanically and collect in suitable container for disposal. Use clean non-sparking tools to collect absorbed material. Ground and bond containers when transferring material. 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 skin, eyes and clothing.
Storage	Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep away from heat and sources of ignition. Protect from light.

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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
Acetone 67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m ³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m ³ (vacated) STEL: 2400 mg/m ³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors (vacated) STEL: 1000 ppm	IDLH: 2500 ppm 10% LEL TWA: 250 ppm TWA: 590 mg/m ³
Methyl Isobutyl Ketone 108-10-1	STEL: 75 ppm TWA: 20 ppm	TWA: 100 ppm TWA: 410 mg/m ³ (vacated) TWA: 50 ppm (vacated) TWA: 205 mg/m ³ (vacated) STEL: 75 ppm (vacated) STEL: 300 mg/m ³	IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m ³ STEL: 75 ppm STEL: 300 mg/m ³

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).

Engineering Measures

Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection
Skin and Body Protection
Respiratory Protection

Tightly fitting safety goggles.
Protective gloves.
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

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless	Odor	Characteristic alcohol
Odor Threshold	No information available.	Physical State	Mobile liquid
pH	No information available.		
Flash Point	68°F / 20°C	Autoignition Temperature	No information available
Decomposition Temperature	No information available	Boiling Point/Range	78°C / 173°F
Melting Point/Range	No information available		
Flammability Limits in Air	No information available	Explosion Limits	No information available
Water Solubility	Soluble in water.	Solubility	No information available
Evaporation Rate	No information available	Vapor Pressure	No data available
Vapor Density	No data available	VOC Content (%)	70.1866

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10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	None known. Strong acids. Strong oxidizing agents. Chlorinated compounds.
Conditions to Avoid	None known. 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 9802.463 mg/kg (rat) estimated

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl Alcohol	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Water	90090 mg/kg (rat)	-	-
Acetone	= 5800 mg/kg (Rat)	-	-
Denatonium Benzoate	= 584 mg/kg (Rat)	-	-
Methyl Isobutyl Ketone	= 2080 mg/kg (Rat)	> 16000 mg/kg (Rabbit)	= 8.2 mg/L (Rat) 4 h

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. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

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
Methyl Isobutyl Ketone	A3			

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.

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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>
Acetone		LC50: 4.74 - 6.33 mL/L (96 h) <i>Oncorhynchus mykiss</i> LC50: 6210 - 8120 mg/L (96 h static) <i>Pimephales promelas</i> LC50: 8300 mg/L (96 h) <i>Lepomis macrochirus</i>	EC50 = 14500 mg/L 15 min	EC50: 10294 - 17704 mg/L (48 h Static) <i>Daphnia magna</i> EC50: 12600 - 12700 mg/L (48 h) <i>Daphnia magna</i>
Methyl Isobutyl Ketone	EC50: 400 mg/L (96 h) <i>Pseudokirchneriella subcapitata</i>	LC50: 496-514 mg/L (96 h flow-through) <i>Pimephales promelas</i>	EC50 = 79.6 mg/L 5 min	EC50: 170 mg/L (48 h) <i>Daphnia magna</i>

Chemical Name	Log Pow
Ethyl Alcohol	-0.32
Acetone	-0.24
Methyl Isobutyl Ketone	1.19

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

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone - 67-64-1		Included in waste stream: F039		U002
Methyl Isobutyl Ketone - 108-10-1		Included in waste stream: F039		U161

California Hazardous Waste Codes 212

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	
Acetone			Ignitable	Recyclable Hazardous Wastes

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14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Consumer Commodity
For NON-Consumer Commodity: Ethyl Alcohol Solutions, 3, UN1170, PGIII
Hazard Class ORM-D
Subsidiary Class
Description Consumer commodity, ORM-D
Emergency Response Guide Number 127

TDG

UN-No UN1170
Proper Shipping Name Ethanol
Hazard Class 3
Packing Group II
Description UN1170, ETHANOL, 3, PG II

MEX

UN-No UN1170
Proper Shipping Name Ethanol
Hazard Class 3
Packing Group II
Description UN1170 Ethanol, 3, II

ICAO

UN-No UN1170
Proper Shipping Name Ethanol solution
Hazard Class 3
Packing Group II
Description UN1170, Ethanol solution, 3, PG II

IATA

UN-No UN1170
Proper Shipping Name Ethanol solution
Hazard Class 3
Packing Group II
ERG Code 3L
Description UN1170, Ethanol solution, 3, PG II

IMDG/IMO

UN-No UN1170
Proper Shipping Name Ethanol
Hazard Class 3
Packing Group II
EmS No. F-E, S-D
Description UN1170, Ethanol, 3, PG II, FP 20C

RID

UN-No UN1170
Proper Shipping Name Ethanol (Ethyl alcohol)
Hazard Class 3
Packing Group II
Classification Code F1
Description UN1170 Ethanol (Ethyl alcohol), 3, II

ADR

UN-No UN1170
Proper Shipping Name Ethanol (Ethyl alcohol)
Hazard Class 3
Packing Group II
Classification Code F1
Description UN1170 Ethanol (Ethyl alcohol), 3, II

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14. TRANSPORT INFORMATION

ADN

UN-No	UN1170
Proper Shipping Name	Ethanol
Hazard Class	3
Packing Group	II
Classification Code	F1
Special Provisions	144, 601
Description	UN1170 Ethanol,3,II
Hazard Labels	3
Limited Quantity	LQ4
Ventilation	VE01

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15. REGULATORY INFORMATION

International Inventories

TSCA	Exempt
DSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
IECSC	Does not Comply
KECL	Does not Comply
PICCS	Does not Comply
AICS	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 %
Methyl Isobutyl Ketone	108-10-1	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
Acetone	67-64-1	1-10		X		
Methyl Isobutyl Ketone	108-10-1	0-1		Group IV		

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Acetone	5000 lb	
Methyl Isobutyl Ketone	5000 lb	

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

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

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethyl Alcohol	X	X	X		X
Acetone	X				X
Methyl Isobutyl Ketone	X	X	X	X	X

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International Regulations

Mexico - Grade

Serious risk, Grade 3

Chemical Name	Carcinogen Status	Exposure Limits
Ethyl Alcohol		Mexico: TWA= 1900 mg/m ³ Mexico: TWA= 1000 ppm
Acetone		Mexico: TWA= 1000 ppm Mexico: TWA= 2400 mg/m ³ Mexico: STEL= 1260 ppm Mexico: STEL= 3000 mg/m ³
Methyl Isobutyl Ketone		Mexico: TWA 50 ppm Mexico: TWA 205 mg/m ³ Mexico: STEL 75 ppm Mexico: STEL 307 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



Chemical Name	NPRI
Methyl Isobutyl Ketone	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Issuing Date April 12, 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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No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made hereunder with respect to information or the product to which the information refers. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this MSDS. The ultimate compliance with federal, state or local regulations concerning the use of this compound, or compliance with respect to product liability, rests solely upon the purchaser thereof.

End of Safety Data Sheet