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

Product identifier

Product Name: Isopropyl Alcohol 99%
Item Number: 883AA

Other means of identification
Synonyms: None

Recommended use of the chemical and restrictions on use

Recommended Use: First Aid
Uses advised against: No information available

Details of the supplier of the safety data sheet

Supplier Address
Vi-Jon Inc.
8515 Page Avenue
Saint Louis
MO
63114
US
Phone: 18004249300
Fax: 3144271010
Contact: Paula Korman
Email:pkorman@vijon.com
Contact Phone: 3145921474

Emergency telephone number
Chemtrec: 1-800-424-9300 (24-Hour)
2. HAZARDS IDENTIFICATION FOR INDUSTRIAL SETTING

Classification
This product contains a chemical or chemicals considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Emergency Overview

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazard statements</strong></td>
<td></td>
</tr>
<tr>
<td>May cause drowsiness or dizziness</td>
<td></td>
</tr>
<tr>
<td>Causes eye irritation</td>
<td></td>
</tr>
<tr>
<td>Flammable liquid and vapor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical State</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear, Colorless, Water thin liquid</td>
<td>Water thin liquid</td>
<td>Alcohol</td>
</tr>
</tbody>
</table>

Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
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
Keep cool

Precautionary Statements – Response
Specific treatment (see supplemental first aid instructions on this label)

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

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

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)
Not Applicable

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

Other information
May be harmful if swallowed
May be harmful if inhaled
Prolonged or repeated contact may dry skin and cause irritation

Interactions with Other Chemicals
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol 99% by volume</td>
<td>67-63-0</td>
<td>50-100</td>
<td>*</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>0-10</td>
<td>*</td>
</tr>
</tbody>
</table>

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

4. FIRST AID MEASURES

First aid measures

Eye Contact
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Skin Contact
In the case of skin irritation or allergic reactions see a physician.

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. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

Protection of First-aiders
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects
Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical, CO₂, water spray, fog or alcohol-resistant foam.

Unsuitable Extinguishing Media
CAUTION: This product has a very low flash point. Use of water spray when fighting fire may be inefficient. Do not use straight streams.

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). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.

Uniform Fire Code
Flammable Liquid: I-B
Irritant: Liquid

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. Move containers from fire area if you can do it without risk.

6. ACCIDENTAL RELEASE MEASURES FOR INDUSTRIAL SETTING

Personal precautions, protective equipment and emergency procedures

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.

Other Information
Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Environmental precautions
Environmental Precautions
Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

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
Soak up with inert absorbent material. Use clean non-sparking tools to collect absorbed material and transfer to properly labeled containers. Keep in suitable and closed containers for disposal.
7. HANDLING AND STORAGE FOR INDUSTRIAL SETTING

Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Keep away from heat, sparks and open flame. No smoking.

Conditions for safe storage, including any incompatibilities

Storage

Incompatible Products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION FOR INDUSTRIAL SETTING

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>STEL: 400 ppm</td>
<td>TWA: 200 ppm</td>
<td>IDLH: 2000 ppm</td>
</tr>
<tr>
<td>67-63-0</td>
<td></td>
<td>TWA: 980 ppm</td>
<td>10% LEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 400 ppm</td>
<td>TWA: 980 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 980 mg/m³</td>
<td>TWA: 400 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) STEL: 500 ppm</td>
<td>STEL: 500 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) STEL: 1225 mg/m³</td>
<td>STEL: 1225 mg/m³</td>
</tr>
</tbody>
</table>

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). See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Tightly fitting safety goggles.

Skin and Body Protection
Wear protective gloves/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. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Water thin liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, Colorless, Water thin liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash Point</td>
<td>-11C / 12F</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Miscible with water</td>
<td>None known</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Other Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softening Point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY FOR INDUSTRIAL SETTING

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

Hazardous Decomposition Products
Carbon oxides.

When used in accordance with the directions.
11. TOXICOLOGICAL INFORMATION FOR INDUSTRIAL SETTING

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
May cause drowsiness and dizziness.

Eye Contact
Irritating to eyes.

Skin Contact
There is no data available for this product.

Ingestion
There is no data available for this product.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>= 4396 mg/kg (Rat)</td>
<td>= 12800 mg/kg (Rabbit)</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

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

Sensitization
No information available.

Mutagenic Effects
No information available.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>Group 3</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

IARC: (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

OSHA: (Occupational Safety & Health Administration)
X - Present

Reproductive Toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Chronic Toxicity
No known effect based on information supplied.

Target Organ Effects
Eyes. Respiratory system. Skin. Central nervous system (CNS).

Aspiration Hazard
No information available.

Numerical measures of toxicity Product Information

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

ATEmix (oral)
4,440.00 mg/kg

ATEmix (dermal)
12,929.00 mg/kg (ATE)

ATEmix (inhalation-dust/mist)
16,162.00 ATEmix
12. ECOLOGICAL INFORMATION FOR INDUSTRIAL SETTING

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

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

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS FOR INDUSTRIAL SETTING

Waste treatment methods

Waste Disposal Methods

This material, as supplied, is not 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

212

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol 67-63-0</td>
<td>Toxic Ignitable</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name: CONSUMER COMMODITY
Hazard Class: ORM-D
Subsidiary Class
Description: CONSUMER COMMODITY, ORM-D
Emergency Response Guide Number: 129

TDG

UN-No: UN1219
Proper Shipping Name: ISOPROPNOL
Hazard Class: 3
Packing Group: II
Description: UN1219, ISOPROPNOL, 3, II

MEX

UN-No: UN1219
Proper Shipping Name: ISOPROPNOL
Hazard Class: 3
Packing Group: II
Description: UN1219 ISOPROPNOL, 3, II

ICAO

UN-No: UN1219
Proper Shipping Name: ISOPROPNOL
Hazard Class: 3
Packing Group: II
Description: UN1219, ISOPROPNOL, 3, II

IATA

UN-No: UN1219
Proper Shipping Name: ISOPROPNOL
Hazard Class: 3
Packing Group: II
Description: UN1219, ISOPROPNOL, 3, II
15. REGULATORY INFORMATION FOR INDUSTRIAL SETTING

International Inventories

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

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol - 67-63-0</td>
<td>67-63-0</td>
<td>50-100</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

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

Clean Water Act
This product does not contain any ingredients 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 ingredients regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

U.S. State Regulations

California Proposition 65 - NONE
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>67-63-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International Regulations

Mexico - Grade
No information available.

National occupational exposure limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td></td>
<td>Mexico: TWA 400 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: TWA 980 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 500 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 1225 mg/m³</td>
</tr>
</tbody>
</table>

Canada

WHMIS Hazard Class
B2
D2B
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>None</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Prepared By
WERCS Professional Services, LLC
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date
March 4, 2014

Revision Date
None

Revision Note
None

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 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.

Vi-Jon, however, makes no representation as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the information will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Vi-Jon be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information.

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