**Isopropanol, 50% v/v**

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/14/2013  
Revision date: 11/07/2017  
Supersedes: 09/23/2015  
Version: 1.1

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### SECTION 1: Identification

#### 1.1. Identification

**Product form**: Mixtures  
**Product name**: Isopropanol, 50% v/v  
**CAS-No.**: 67-63-0  
**Product code**: LC15755  
**Formula**: C3H8O

#### 1.2. Recommended use and restrictions on use

**Use of the substance/mixture**: For laboratory and manufacturing use only.  
**Recommended use**: Laboratory chemicals  
**Restrictions on use**: Not for food, drug or household use

#### 1.3. Supplier

LabChem Inc  
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
Zelienople, PA 16063 - USA  
T 412-826-5230 - F 724-473-0647  
info@labchem.com - www.labchem.com

#### 1.4. Emergency telephone number

**Emergency number**: CHEMTREC: 1-800-424-9300 or 011-703-527-3887

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### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

**GHS-US classification**

- **Flammable liquids**: H225 - Highly flammable liquid and vapor  
- **Serious eye damage/eye irritation Category 2A**: H319 - Causes serious eye irritation  
- **Specific target organ toxicity (single exposure) Category 3**: H335 - May cause respiratory irritation

Full text of H statements: see section 16

#### 2.2. GHS Label elements, including precautionary statements

**GHS-US labeling**

- **Hazard pictograms (GHS-US)**:  
- **Signal word (GHS-US)**: Danger  
- **Hazard statements (GHS-US)**:  
  - H225 - Highly flammable liquid and vapor  
  - H319 - Causes serious eye irritation  
  - H335 - May cause respiratory irritation  
- **Precautionary statements (GHS-US)**:  
  - P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
  - P233 - Keep container tightly closed  
  - P240 - Ground/bond container and receiving equipment  
  - P241 - Use explosion-proof electrical, lighting, ventilating equipment  
  - P242 - Use only non-sparking tools  
  - P243 - Take precautionary measures against static discharge  
  - P261 - Avoid breathing mist, spray, vapors  
  - P264 - Wash exposed skin thoroughly after handling  
  - P271 - Use only outdoors or in a well-ventilated area  
  - P280 - Wear eye protection, face protection, protective clothing, protective gloves  
  - P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
  - P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present

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lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P337+P313 - If eye irritation persists: Get medical advice/attention
P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide
(CO2) to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations
If inhaled: Remove person to fresh air and keep comfortable for breathing

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol (2-Propanol)</td>
<td>(CAS-No.) 67-63-0</td>
<td>50</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td>Water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>50</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.


4.2. Most important symptoms and effects (acute and delayed)


Symptoms/effects after skin contact: Dry skin.

Symptoms/effects after eye contact: Irritation of the eye tissue.


4.3. Immediate medical attention and special treatment, if necessary

No additional information available
**SECTION 5: Fire-fighting measures**

5.1. Suitable (and unsuitable) extinguishing media


Unsuitable extinguishing media: Solid water jet ineffective as extinguishing medium.

5.2. Specific hazards arising from the chemical

- **Fire hazard:** DIRECT FIRE HAZARD. Highly flammable. Gas/vapor flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Gas/vapor spreads at floor level: ignition hazard.

- **Explosion hazard:** DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. May be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

- **Reactivity:** Upon combustion: CO and CO2 are formed. Violent to explosive reaction with (strong) oxidizers. Prolonged storage/in large quantities: may form peroxides.

5.3. Special protective equipment and precautions for fire-fighters

- **Firefighting instructions:** Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.

- **Protection during firefighting:** Heat/fire exposure: compressed air/oxygen apparatus.

**SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- **Protective equipment:** Gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus. See "Material-Handling" to select protective clothing.


6.1.2. For emergency responders

- **Protective equipment:** Equip cleanup crew with proper protection.

- **Emergency procedures:** Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

- **For containment:** Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Do not use compressed air for pumping over spills.

- **Methods for cleaning up:** Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

- **Precautions for safe handling:** Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark/explosion-proof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation.
Hygiene measures: Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible products: Oxidizing agent. silver nitrate. Sodium hypochlorite.
Incompatible materials: Direct sunlight. Heat sources. Sources of ignition.
Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents. strong acids. (strong) bases. amines. halogens.

Storage area: Store in a cool area. Store in a dry area. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. May be stored under nitrogen. Meet the legal requirements.

Special rules on packaging: SPECIAL REQUIREMENTS: closing. with pressure relief valve. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.


SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>OSHA PEL (TWA) (ppm)</th>
<th>IDLH (ppm)</th>
<th>NIOSH REL (TWA) (mg/m³)</th>
<th>NIOSH REL (TWA) (ppm)</th>
<th>NIOSH REL (STEL) (mg/m³)</th>
<th>NIOSH REL (STEL) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol, 50% v/v (67-63-0)</td>
<td>200 ppm (2-propanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)</td>
<td>400 ppm (2-propanol; USA; Short time value; TLV - Adopted Value)</td>
<td>980 mg/m³</td>
<td>400 ppm</td>
<td>2000 ppm</td>
<td>980 mg/m³</td>
<td>400 ppm</td>
<td>1225 mg/m³</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Isopropyl Alcohol (2-Propanol) (67-63-0)</td>
<td>200 ppm (2-propanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)</td>
<td>400 ppm (2-propanol; USA; Short time value; TLV - Adopted Value)</td>
<td>980 mg/m³</td>
<td>400 ppm</td>
<td>2000 ppm</td>
<td>980 mg/m³</td>
<td>400 ppm</td>
<td>1225 mg/m³</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.
**8.3. Individual protection measures/Personal protective equipment**

**Personal protective equipment:**
Gloves. Safety glasses. Gas mask with filter type A.

**Materials for protective clothing:**
GIVE EXCELLENT RESISTANCE: butyl rubber. nitrile rubber. viton. polyethylene/ethylenevinylalcohol. GIVE GOOD RESISTANCE: neoprene. GIVE LESS RESISTANCE: PVC. neoprene/natural rubber. GIVE POOR RESISTANCE: natural rubber. polyethylene. PVA

**Hand protection:**
Gloves

**Eye protection:**
Safety glasses

**Skin and body protection:**
Protective clothing

**Respiratory protection:**
Wear gas mask with filter type A if conc. in air > exposure limit

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**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol odour Stuffy odour Mild odour</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>3 - 610 ppm</td>
</tr>
<tr>
<td></td>
<td>8 - 1499 mg/m³</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>-88 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>82 °C (1013 hPa)</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>235 °C</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>47600 hPa</td>
</tr>
<tr>
<td>Flash point</td>
<td>12 °C</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>2.3</td>
</tr>
<tr>
<td>Relative evaporation rate (ether=1)</td>
<td>21</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>44 hPa (20 °C)</td>
</tr>
<tr>
<td>Vapor pressure at 50 °C</td>
<td>60.2 hPa (25 °C)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>2.1</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.88</td>
</tr>
<tr>
<td>Relative density of saturated gas/air mixture</td>
<td>1.05</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>0.92 g/ml</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>60.1 g/mol</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>0.05 (Weight of evidence approach; Other; 25 °C)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>399 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>2.5316 mm²/s (25 °C)</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>0.002 Pa.s (25 °C)</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>2 - 13 vol %</td>
</tr>
<tr>
<td></td>
<td>50 - 335 g/m³</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Upon combustion: CO and CO2 are formed. Violent to explosive reaction with (strong) oxidizers. Prolonged storage/in large quantities: may form peroxides.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No additional information available

**10.4. Conditions to avoid**


**10.5. Incompatible materials**

May react violently with alkalis. May react violently with acids.

**10.6. Hazardous decomposition products**

Carbon dioxide. Carbon monoxide.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

*Likely routes of exposure:* Inhalation; Skin and eye contact

*Acute toxicity:* Not classified

### Isopropanol, 50% v/v (67-63-0)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rabbit</td>
<td>12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>73 mg/l/4h (Rat)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>5045 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>12870 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>73 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>73 mg/l/4h</td>
</tr>
</tbody>
</table>

### Isopropyl Alcohol (2-Propanol) (67-63-0)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rabbit</td>
<td>12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>73 mg/l/4h (Rat)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>5045 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>12870 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>73 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>73 mg/l/4h</td>
</tr>
</tbody>
</table>

### Water (7732-18-5)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>≥ 90000 mg/kg</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Water (7732-18-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
</tr>
<tr>
<td>Skin corrosion/irritation : Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation : Causes serious eye irritation.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization : Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity : Not classified</td>
</tr>
<tr>
<td>Carcinogenicity : Not classified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopropanol, 50% v/v (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
</tr>
<tr>
<td>Reproductive toxicity : Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure : May cause respiratory irritation.</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure : Not classified</td>
</tr>
<tr>
<td>Aspiration hazard : Not classified</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact : Dry skin.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact : Irritation of the eye tissue.</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC. Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5.

Ecology - water : Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia). Not harmful to algae (EC50 (72h) >1000 mg/l). Inhibition of activated sludge.

<table>
<thead>
<tr>
<th>Isopropanol, 50% v/v (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 2</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopropyl Alcohol (2-Propanol) (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 2</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Isopropanol, 50% v/v (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
</tr>
</tbody>
</table>
Isopropanol, 50% v/v
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Isopropanol, 50% v/v (67-63-0)

Chemical oxygen demand (COD) 2.23 g O₂/g substance
ThOD 2.4 g O₂/g substance

Isopropyl Alcohol (2-Propanol) (67-63-0)

Persistence and degradability
Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No test data on mobility of the substance available.

Biochemical oxygen demand (BOD) 1.19 g O₂/g substance
Chemical oxygen demand (COD) 2.23 g O₂/g substance
ThOD 2.4 g O₂/g substance

Water (7732-18-5)

Persistence and degradability Not established.

12.3. Bioaccumulative potential

Isopropanol, 50% v/v (67-63-0)
Log Pow 0.05 (Weight of evidence approach; Other; 25 °C)
Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).

Isopropyl Alcohol (2-Propanol) (67-63-0)
Log Pow 0.05 (Weight of evidence approach; Other; 25 °C)
Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).

Water (7732-18-5)
Bioaccumulative potential Not established.

12.4. Mobility in soil

Isopropanol, 50% v/v (67-63-0)
Surface tension 0.021 N/m (25 °C)

Isopropyl Alcohol (2-Propanol) (67-63-0)
Surface tension 0.021 N/m (25 °C)

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.
GWPmix comment : No known effects from this product.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Additional information : LWCA (the Netherlands): KGA category 03. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT

Transport document description : UN1219 Isopropanol, 3, II
UN-No.(DOT) : UN1219
Proper Shipping Name (DOT) : Isopropanol
Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT) : II - Medium Danger
**Isopropanol, 50% v/v**  
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**Hazard labels (DOT)**

- 3 - Flammable liquid

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**DOT Packaging Non Bulk (49 CFR 173.xxx)**

- 202

---

**DOT Packaging Bulk (49 CFR 173.xxx)**

- 242

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**DOT Special Provisions (49 CFR 172.102)**

- IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

**DOT Packaging Exceptions (49 CFR 173.xxx)**

- 4b,150

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**DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)**

- 5 L

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**DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)**

- 60 L

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**DOT Vessel Stowage Location**

- B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

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**Other information**

- No supplementary information available.

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

<table>
<thead>
<tr>
<th>Chemical(s)</th>
<th>CAS-No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol (2-Propanol)</td>
<td>67-63-0</td>
<td>50%</td>
</tr>
</tbody>
</table>

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#### 15.2. International regulations

**CANADA**

No additional information available.

**EU-Regulations**

No additional information available.

**National regulations**

No additional information available.

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#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

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### SECTION 16: Other information

**Revision date**

- 11/07/2017
Isopropanol, 50% v/v
Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H225</th>
<th>Highly flammable liquid and vapor</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

NFPA health hazard: 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity: 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating

Health: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection: H

H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

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