

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name. : Isopropanol, 70% v/v  
CAS No : 67-63-0  
Product code : LC15760  
Formula : C<sub>3</sub>H<sub>8</sub>O  
BIG no : 10028

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Disinfectant  
Solvent

#### 1.3. Details of the supplier of the safety data sheet

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](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazards identification

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

##### GHS-US classification

Flam. Liq. 2 H225  
Eye Irrit. 2A H319  
STOT SE 3 H336

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapour  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness

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, vapours  
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  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a POISON CENTER/doctor/.../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 (CO<sub>2</sub>) for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P235 - Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with local, state and federal regulations

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### 2.3. Other hazards

Other hazards not contributing to the classification : None.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture

| Name        | Product identifier | %  | GHS-US classification  |
|-------------|--------------------|----|--|
| Isopropanol | (CAS No) 67-63-0   | 70 | Flam. Liq. 2, H225<br>Eye Irrit. 2A, H319<br>STOT SE 3, H336 |
| Water       | (CAS No) 7732-18-5 | 30 | Not classified   |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink. |
| 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.  |
| First-aid measures after ingestion    | : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Give activated charcoal. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage.   |

### 4.2. Most important symptoms and effects, both acute and delayed

|                                      |   |
|--------------------------------------|---|
| Symptoms/injuries after inhalation   | : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.   |
| Symptoms/injuries after skin contact | : No data available.  |
| Symptoms/injuries after eye contact  | : Irritation of the eye tissue.   |
| Symptoms/injuries after ingestion    | : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. |
| Chronic symptoms                     | : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.  |

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide. |
| Unsuitable extinguishing media | : Solid water jet ineffective as extinguishing medium.                             |

### 5.2. Special hazards arising from the substance or mixture

|                  |  |
|------------------|--|
| Fire hazard      | : DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Gas/vapour 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. Advice for firefighters

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

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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.

Emergency procedures : Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.

##### 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. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. 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. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. 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-/explosionproof 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 and ignition sources : 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.

Packaging materials : SUITABLE MATERIAL: stainless steel. monel steel. carbon steel. copper. nickel. bronze. glass. Teflon. polyethylene. polypropylene. zinc. MATERIAL TO AVOID: steel with rubber inner lining. aluminium.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Isopropanol, 70% v/v (67-63-0)

|           |                 |         |
|-----------|-----------------|---------|
| USA ACGIH | ACGIH TWA (ppm) | 200 ppm |
|-----------|-----------------|---------|

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| Isopropanol, 70% v/v (67-63-0) |                        |           |
|--------------------------------|------------------------|-----------|
| USA ACGIH                      | ACGIH STEL (ppm)       | 400 ppm   |
| USA OSHA                       | OSHA PEL (TWA) (mg/m³) | 980 mg/m³ |
| USA OSHA                       | OSHA PEL (TWA) (ppm)   | 400 ppm   |

| Isopropanol (67-63-0) |                        |           |
|-----------------------|------------------------|-----------|
| USA ACGIH             | ACGIH TWA (ppm)        | 200 ppm   |
| USA ACGIH             | ACGIH STEL (ppm)       | 400 ppm   |
| USA OSHA              | OSHA PEL (TWA) (mg/m³) | 980 mg/m³ |
| USA OSHA              | OSHA PEL (TWA) (ppm)   | 400 ppm   |

### 8.2. Exposure controls

|                                   |  |
|-----------------------------------|--|
| Appropriate engineering controls  | : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.   |
| Materials for protective clothing | : GIVE EXCELLENT RESISTANCE: butyl rubber. nitrile rubber. viton.<br>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                    | : Protective goggles.  |
| Skin and body protection          | : Protective clothing.   |
| Respiratory protection            | : Wear gas mask with filter type A if conc. in air > exposure limit.   |

## SECTION 9: Physical and chemical properties

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

|   |  |
|---|--|
| Physical state                                | : Liquid   |
| Appearance                                    | : Liquid.  |
| Molecular mass                                | : 60.10 g/mol  |
| Colour  | : Colourless.  |
| Odour   | : Alcohol odour. Stuffy odour. Mild odour.   |
| Odour threshold                               | : 3 - 610 ppm<br>8 - 1499 mg/m³  |
| pH  | : No data available  |
| Relative evaporation rate (butylacetate=1)    | : 2.3  |
| Relative evaporation rate (ether=1)           | : 21   |
| Melting point                                 | : -88 °C   |
| Freezing point                                | : No data available  |
| Boiling point                                 | : 82 °C  |
| Flash point                                   | : 12 °C  |
| Critical temperature                          | : 235 °C   |
| Self ignition temperature                     | : 399 °C   |
| Decomposition temperature                     | : No data available  |
| Flammability (solid, gas)                     | : No data available  |
| Vapour pressure                               | : 44 hPa   |
| Vapour pressure at 50 °C                      | : 229 hPa  |
| Critical pressure                             | : 47600 hPa  |
| Relative vapour density at 20 °C              | : 2.1  |
| Relative density                              | : 0.88   |
| Relative density of saturated gas/air mixture | : 1.05   |
| Density                                       | : 0.88 g/ml  |
| Solubility                                    | : Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in oils/fats.<br>Soluble in chloroform.<br>Water: Complete<br>Ethanol: Complete<br>Ether: Complete<br>Acetone: soluble |
| Log Pow                                       | : 0.05 (Experimental value)  |
| Log Kow                                       | : No data available  |
| Viscosity, kinematic                          | : 2.5316 mm²/s (25 °C)   |

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|                      |                                 |
|----------------------|---------------------------------|
| Viscosity, dynamic   | : 0.0020 Pa.s (25 °C)           |
| Explosive properties | : No data available             |
| Oxidising properties | : No data available             |
| Explosive limits     | : 2 - 13 vol %<br>50 - 335 g/m³ |

### 9.2. Other information

|                          |   |
|--------------------------|---|
| Minimum ignition energy  | : 0.65 mJ   |
| Specific conductivity    | : 5.8 µS/m  |
| Saturation concentration | : 106 g/m³  |
| VOC content              | : 100 %   |
| Other properties         | : Gas/vapour heavier than air at 20°C. Clear. Volatile. |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Upon combustion: CO and CO<sub>2</sub> 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

Direct sunlight. Heat. High temperature. Incompatible materials. Open flame. Sparks.

### 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

Acute toxicity : Not classified

| Isopropanol, 70% v/v ( 167-63-0 |  |
|---------------------------------|--|
| LD50 oral rat                   | 5045 mg/kg (5840 mg/kg bodyweight; Rat; Rat; Experimental value,5840 mg/kg bodyweight; Rat; Rat; Experimental value) |
| LD50 dermal rabbit              | 12870 mg/kg (16.4; Rabbit; Rabbit; Experimental value,16.4; Rabbit; Rabbit; Experimental value)                      |
| LC50 inhalation rat (mg/l)      | 73 mg/l/4h (Rat)   |

| Isopropanol (67-63-0)      |  |
|----------------------------|--|
| LD50 oral rat              | 5045 mg/kg (5840 mg/kg bodyweight; Rat; Rat; Experimental value,5840 mg/kg bodyweight; Rat; Rat; Experimental value) |
| LD50 dermal rabbit         | 12870 mg/kg (16.4; Rabbit; Rabbit; Experimental value,16.4; Rabbit; Rabbit; Experimental value)                      |
| LC50 inhalation rat (mg/l) | 73 mg/l/4h (Rat)   |

| Water (7732-18-5)                 |                                  |
|-----------------------------------|----------------------------------|
| LD50 oral rat                     | ≥ 90000 mg/kg                    |
| Skin corrosion/irritation         | : Not classified                 |
| Serious eye damage/irritation     | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : Not classified                 |
| Germ cell mutagenicity            | : Not classified                 |
| Carcinogenicity                   | : Not classified                 |

| Isopropanol, 70% v/v (67-63-0) |   |
|--------------------------------|---|
| IARC group                     | 3 |

| Isopropanol (67-63-0) |   |
|-----------------------|---|
| IARC group            | 3 |

|  |                                      |
|--|--------------------------------------|
| Reproductive toxicity                            | : Not classified                     |
| Specific target organ toxicity (single exposure) | : May cause drowsiness or dizziness. |

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|  |   |
|--|---|
| Specific target organ toxicity (repeated exposure) | : Not classified  |
| Aspiration hazard                                  | : Not classified  |
| Symptoms/injuries after inhalation                 | : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.   |
| Symptoms/injuries after skin contact               | : No data available.  |
| Symptoms/injuries after eye contact                | : Irritation of the eye tissue.   |
| Symptoms/injuries after ingestion                  | : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. |
| Chronic symptoms                                   | : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.  |

## SECTION 12: Ecological information

### 12.1. Toxicity

|                   |  |
|-------------------|--|
| Ecology - general | : Classification concerning the environment: not applicable.   |
| Ecology - air     | : 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) (EC50 (48h) > 1000 mg/l). Not harmful to algae (EC50 (72h) >1000 mg/l). Inhibition of activated sludge. |

| Isopropanol, 70% v/v (67-63-0) |   |
|--------------------------------|---|
| LC50 fishes 1                  | 4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system) |
| EC50 Daphnia 1                 | > 10000 mg/l (48 h; Daphnia magna)                          |
| LC50 fish 2                    | 9640 mg/l (96 h; Pimephales promelas; LETHAL)               |
| EC50 Daphnia 2                 | 13299 mg/l (48 h; Daphnia magna)                            |
| Threshold limit algae 1        | > 1000 mg/l (72 h; Scenedesmus subspicatus; GROWTH RATE)    |
| Threshold limit algae 2        | 1800 mg/l (72 h; Algae; CELL NUMBERS)                       |

| Isopropanol (67-63-0)   |   |
|-------------------------|---|
| LC50 fishes 1           | 4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system) |
| EC50 Daphnia 1          | > 10000 mg/l (48 h; Daphnia magna)                          |
| LC50 fish 2             | 9640 mg/l (96 h; Pimephales promelas; LETHAL)               |
| EC50 Daphnia 2          | 13299 mg/l (48 h; Daphnia magna)                            |
| Threshold limit algae 1 | > 1000 mg/l (72 h; Scenedesmus subspicatus; GROWTH RATE)    |
| Threshold limit algae 2 | 1800 mg/l (72 h; Algae; CELL NUMBERS)                       |

### 12.2. Persistence and degradability

| Isopropanol, 70% v/v (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 O <sub>2</sub> /g substance   |
| Chemical oxygen demand (COD)    | 2.23 g O <sub>2</sub> /g substance   |
| ThOD                            | 2.40 g O <sub>2</sub> /g substance   |
| BOD (% of ThOD)                 | 0.49 % ThOD  |

| Isopropanol (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 O <sub>2</sub> /g substance   |
| Chemical oxygen demand (COD)    | 2.23 g O <sub>2</sub> /g substance   |
| ThOD                            | 2.40 g O <sub>2</sub> /g substance   |
| BOD (% of ThOD)                 | 0.49 % ThOD  |

### 12.3. Bioaccumulative potential

| Isopropanol, 70% v/v (67-63-0) |  |
|--------------------------------|--|
| Log Pow                        | 0.05 (Experimental value)                        |
| Bioaccumulative potential      | Low potential for bioaccumulation (Log Kow < 4). |

| Isopropanol (67-63-0)     |  |
|---------------------------|--|
| Log Pow                   | 0.05 (Experimental value)                        |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

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### 12.4. Mobility in soil

#### Isopropanol, 70% v/v (67-63-0)

|                 |                   |
|-----------------|-------------------|
| Surface tension | 0.021 N/m (25 °C) |
|-----------------|-------------------|

#### Isopropanol (67-63-0)

|                 |                   |
|-----------------|-------------------|
| Surface tension | 0.021 N/m (25 °C) |
|-----------------|-------------------|

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment 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

In accordance with DOT

### 14.1. UN number

|             |        |
|-------------|--------|
| UN-No.(DOT) | : 1219 |
| DOT NA no.  | UN1219 |

### 14.2. UN proper shipping name

|   |   |
|---|---|
| DOT Proper Shipping Name                          | : Isopropanol   |
| Department of Transportation (DOT) Hazard Classes | : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 |
| Hazard labels (DOT)                               | : 3 - Flammable liquids   |



|   |  |
|---|--|
| Packing group (DOT)                       | : II - Medium Danger   |
| 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.<br>T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)<br>TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 4b;150   |
| DOT Packaging Non Bulk (49 CFR 173.xxx)   | : 202  |
| DOT Packaging Bulk (49 CFR 173.xxx)       | : 242  |

### 14.3. Additional information

|                                  |   |
|----------------------------------|---|
| Other information                | : No supplementary information available. |
| State during transport (ADR-RID) | : as liquid.                              |

### Overland transport

|   |                         |
|---|-------------------------|
| Packing group (ADR)                       | : II                    |
| Class (ADR)                               | : 3 - Flammable liquids |
| Hazard identification number (Kemler No.) | : 33                    |
| Classification code (ADR)                 | : F1                    |



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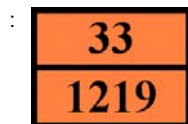
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Danger labels (ADR) : 3 - Flammable liquids



Orange plates



Tunnel restriction code : D/E

### Transport by sea

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.

EmS-No. (1) : F-E

EmS-No. (2) : S-D

### Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L  
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L  
CFR 175.75)

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Isopropanol (67-63-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on SARA Section 313 (Specific toxic chemical listings)

### 15.2. International regulations

#### CANADA

#### Isopropanol (67-63-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

|                      |  |
|----------------------|--|
| WHMIS Classification | Class B Division 2 - Flammable Liquid<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
|----------------------|--|

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

### Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11  
Xi; R36  
R67

Full text of R-phrases: see section 16

#### 15.2.2. National regulations

#### Isopropanol (67-63-0)

Listed on the Canadian Ingredient Disclosure List

### 15.3. US State regulations

#### Isopropanol (67-63-0)



# Isopropanol, 70% v/v

## Safety Data Sheet

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

### SECTION 16: Other information

Full text of H-phrases: see section 16:

|               |  |
|---------------|--|
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A                         |
| Flam. Liq. 2  | Flammable liquids, Category 2  |
| STOT SE 3     | Specific target organ toxicity — Single exposure, Category 3, Narcosis |
| H225          | Highly flammable liquid and vapour                                     |
| H319          | Causes serious eye irritation  |
| H336          | May cause drowsiness or dizziness                                      |

NFPA health hazard

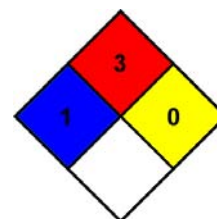
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 3 Serious Hazard

Physical

: 0 Minimal Hazard

Personal Protection

: H

SDS US (GHS HazCom 2012)

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