According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

SECTION 1: Identification

Product identifier

Product name: Isopropanol (Isopropyl Alcohol), Product code: FEDIP1005-C

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals Uses advised against: Not determined or not applicable. Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

| Manufacturer: | Supplier: |
|------------------------|--------------------------|
| United States | United States |
| AquaPhoenix Scientific | Fisher Science Education |
| 860 Gitts Run Road | 6771 Silver Crest Road |
| Hanover | Nazareth |
| PA 17331 | PA 18064 |
| (717) 632-1291 | 800 955-1177 |

Emergency telephone number: United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard identification

GHS classification:

Flammable liquids, category 2 Eye irritation, category 2A Specific target organ toxicity - single exposure, category 3, central nervous system

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P271 Use only outdoors or in a well-ventilated area.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

According to Canadian Hazardous Products Regulations and WHMIS 2015

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Isopropanol (Isopropyl Alcohol),

P241 Use explosion-proof electrical/ventilating/light/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash skin thoroughly after handling.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P303+P361+P353 If on skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

P370+P378 In case of fire: Use agents recommended in section 5 for extinction.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P304+P340+P312 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.

P405 Store locked up.

P403+P233 Store in a well ventilated place. Keep container tightly closed.

P501 Dispose of contents and container as instructed in Section 13.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

| Identification | Name | Weight % |
|------------------------|-------------------|----------|
| CAS number: 67-63-0 | Isopropyl Alcohol | 100 |

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:

Not determined or not available.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position Maintain an unobstructed airway

After skin contact:

Rinse affected area with soap and water If symptoms develop or persist, seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes Remove contact lens(es) if able to do so during rinsing Seek medical attention if irritation persists or if concerned

After ingestion:

Rinse mouth thoroughly Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not available.

Delayed symptoms and effects:

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not available.

Notes for the doctor:

Not determined or not available.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

Use dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Vapors can flow to distant ignition sources and flashback Liquid is volatile and may generate an explosive atmosphere

Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing Refer to Section 8

Special precautions:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols Avoid contact with skin, eyes and clothing

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Beware of vapors accumulating to form explosive concentrations Vapors can accumulate in low areas Ensure adequate ventilation Ensure air handling systems are operational

Environmental precautions:

Should not be released into the environment Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing Use spark-proof tools and explosion-proof equipment

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances. Avoid breathing mist or vapor. Use only non-sparking tools.

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

Take precautionary measures against electrostatic discharges.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

Keep container tightly sealed.

Keep away from all ignition sources: open flames, hot surfaces, direct sunlight, spark sources.

Store locked up.

Use appropriate containment to avoid environmental contamination.

Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

| Country (Legal Basis) | Substance | Identifier | Permissible concentration |
|-----------------------|-------------------|------------|---|
| ACGIH | Isopropyl Alcohol | 67-63-0 | ACGIH TLV STEL 400 ppm |
| | Isopropyl Alcohol | 67-63-0 | ACGIH TLV TWA 200 ppm |
| NIOSH | Isopropyl Alcohol | 67-63-0 | NIOSH IDLH 2,000 ppm |
| | Isopropyl Alcohol | 67-63-0 | NIOSH STEL 500 ppm, 1,225 mg/m ³ |
| | Isopropyl Alcohol | 67-63-0 | NIOSH TWA 400 ppm, 980 mg/m ³ |
| United States (OSHA) | Isopropyl Alcohol | 67-63-0 | OSHA PEL TWA 400 ppm, 980 mg/m³ |

Biological limit values:

| Substance | Identifier | Determinant | Sampling time | Permissible limits |
|-------------------|------------|-------------|--|-----------------------|
| Isopropyl Alcohol | 67-63-0 | | End of shift at end of workweek. | 40 mg/L |

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:

Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing.

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | Clean estadas linuid | |
|--|--|--|
| Appearance (physical state, color): | Clear, colorless liquid | |
| Odor: | Alcoholic | |
| Odor threshold: | Not determined or not available. | |
| pH-value: | Not determined or not available. | |
| Melting/Freezing point: | -127.3 °F (-88.5 °C) | |
| Boiling point/range: | 180.5 °F (82.5 °C) 101.325 kPa | |
| Flash point: | 53.60 °F (12.00 °C) Closed Cup, 75.00 °F (23.89 °C) Open Cup | |
| Evaporation rate: | Not determined or not available. | |
| Flammability (solid, gaseous): | Not determined or not available. | |
| Explosion limit upper: | 12 | |
| Explosion limit lower: | 2.5 | |
| Vapor pressure: | 6.053 kPa at 25 °C | |
| Vapor density: | 2.1 | |
| Density: | 0.78 g/cm³ estimated | |
| Relative density: | 0.785 at 20 °C | |
| Solubilities: | Not determined or not available. | |
| Partition coefficient (n-octanol/water): | 0.1 | |
| Auto/Self-ignition temperature: | 750.2 °F (399 °C) | |
| Decomposition temperature: | When heated to decomp, emits acrid smoke and fumes. | |
| Dynamic viscosity: | 2.1 mPa.s at 77 °F (25 °C) | |
| Kinematic viscosity: | Not determined or not available. | |
| Explosive properties | Not determined or not available. | |
| Oxidizing properties | Not determined or not available. | |

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Heat, flames and sparks. Avoid temperatures exceeding the flash point.

Incompatible materials:

Strong oxidizing agents, isocyanates, acids, chlorine.

Hazardous decomposition products:

May include oxides of carbon.

SECTION 11: Toxicological information

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Causes serious eye irritation

Product data: No data available.

Substance data:

| Name | Result |
|-------------------|--------------------------------|
| Isopropyl Alcohol | Causes serious eye irritation. |

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC):

| Name | Classification |
|-------------------|--|
| Isopropyl Alcohol | Group 3 - Not classifiable as to its carcinogenicity to humans |

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: May cause drowsiness or dizziness

Product data: No data available.

Substance data:

| Name | Result |
|------|--|
| | Specific Target Organ Toxicity, Single Exposure - May cause drowsiness or dizziness. |

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met. Product data: No data available. Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available. **Substance data:** No data available.

Persistence and degradability

Product data: No data available. **Substance data:** No data available.

Bioaccumulative potential

Product data: No data available. **Substance data:** No data available.

Mobility in soil

Product data: No data available. Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

Canadian Transportation of Dangerous Goods (TDG)

| UN number | 1219 | |
|-------------------------------|-------------|---|
| UN proper shipping name | Isopropanol | |
| UN transport hazard class(es) | 3 | > |
| Packing group | П | |
| Environmental hazards | None | |

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

Special precautions for user

None

International Maritime Dangerous Goods (IMDG)

| UN number | 1219 | |
|-------------------------------|-------------|-----------|
| UN proper shipping name | Isopropanol | |
| UN transport hazard class(es) | 3 | enter and |
| Packing group | П | |
| Environmental hazards | None | |
| Special precautions for user | None | |
| EmS number | F-E, S-D | |

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

| UN number | 1219 | |
|-------------------------------|-------------|-------------|
| UN proper shipping name | Isopropanol | |
| UN transport hazard class(es) | 3 | remarked by |
| Packing group | 11 | |
| Environmental hazards | None | |
| Special precautions for user | None | |
| ERG code | 3L | |

| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | |
|---|------|
| Bulk Name | None |
| Ship type | None |
| Pollution category | None |

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL):

| | 67-63-0 | Isopropyl Alcohol |
|--|---------|-------------------|
|--|---------|-------------------|

Listed

Non-domestic substances list (NDSL): Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 06.14.2017

Isopropanol (Isopropyl Alcohol),

information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-3-0

HMIS: 1-3-0

Initial preparation date: 06.14.2017

End of Safety Data Sheet

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