

## BIO BASIC INC.

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MATERIAL SAFETY DATA SHEET

REQUIRED UNDER SAFETY AND HEALTH REGULATION FOR SHIP REPAIRING

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### SECTION 1. ----- CHEMICAL IDENTIFICATION-----

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Propanol  
Product Number : D0279 (IB0918)

### SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Synonyms : sec-Propyl alcohol  
Isopropyl alcohol  
Isopropanol  
Formula : C<sub>3</sub>H<sub>8</sub>O  
Molecular Weight : 60.1 g/mol  
CAS-No. EC-No. Index-No. Concentration  
Propan-2-ol  
67-63-0 200-661-7 603-117-00-0 –

### SECTION 3. ----- HAZARDS IDENTIFICATION -----

Emergency Overview  
Target Organs  
Gastrointestinal tract, Liver, Cardiovascular system., Kidney, Nerves.  
WHMIS Classification  
B2  
D2B  
Flammable Liquid Flammable Liquid  
Moderate eye irritant  
HMIS Classification  
Health Hazard: 2  
Chronic Health Hazard: \*  
Flammability: 3  
Physical hazards: 0  
Reactivity: 1  
NFPA Rating  
Health Hazard: 2  
Fire: 3  
Reactivity Hazard: 1  
Potential Health Effects  
Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.  
Skin May be harmful if absorbed through skin. Causes skin irritation.  
Eyes Causes eye irritation.  
Ingestion May be harmful if swallowed.

#### **SECTION 4. ----- FIRST-AID MEASURES-----**

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

##### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **SECTION 5. ----- FIRE FIGHTING MEASURES -----**

##### Flammable properties

Flash point 12.0 °C (53.6 °F) - closed cup

Ignition temperature 425 °C (797 °F)

##### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

##### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

##### Further information

Use water spray to cool unopened containers.

#### **SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----**

##### Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

##### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

##### Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### **SECTION 7. ----- HANDLING AND STORAGE-----**

##### Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

##### Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Handle and store under inert gas. Hygroscopic

#### **SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----**

##### Components with workplace control parameters

Components CAS-No. Value Control

##### parameters

Update Basis

Propan-2-ol 67-63-0 TWA 200 ppm 2006-11-29 Canada. British Columbia

OEL

STEL 400 ppm 2006-11-29 Canada. British Columbia

OEL

TWAE

V

200 ppm 2005-12-17 Canada. Ontario OELs

STEV 400 ppm 2005-12-17 Canada. Ontario OELs

STEL 500 ppm

1,230 mg/m<sup>3</sup>

2007-01-01 Canada. Alberta,

Occupational Health and

Safety Code (table 2: OEL)

Remarks Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required

TWA 400 ppm

983 mg/m<sup>3</sup>

2007-01-01 Canada. Alberta,

Occupational Health and

Safety Code (table 2: OEL)

Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required

STEL 500 ppm

1,230 mg/m<sup>3</sup>

2004-04-30 Canada. Alberta,

Occupational Health and

Safety Code (table 2: OEL)

Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required

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983 mg/m<sup>3</sup>

2004-04-30 Canada. Alberta,

Occupational Health and

Safety Code (table 2: OEL)

Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required

TWAE

V

400 ppm

983 mg/m<sup>3</sup>

2006-12-29 Canada. Quebec OELs

STEV 500 ppm 2006-12-29 Canada. Quebec OELs

1,230 mg/m<sup>3</sup>

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -**

Appearance

Form liquid

Colour colourless

Odour alcoholic

Safety data

pH no data available

Melting point -89.5 °C (-129.1 °F)

Boiling point 82 °C (180 °F)

Flash point 12.0 °C (53.6 °F) - closed cup

Ignition temperature 425 °C (797 °F)

Lower explosion limit 2 %(V)

Upper explosion limit 12.7 %(V)

Vapour pressure 43.2 hPa (32.4 mmHg) at 20.0 °C (68.0 °F)

58.7 hPa (44.0 mmHg) at 25.0 °C (77.0 °F)

Density 0.785 g/mL at 25 °C (77 °F)

Water solubility completely soluble

Partition coefficient:

n-octanol/water

log Pow: 0.05

Evaporation rate 3.0

#### **SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -**

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Hazardous reactions

Vapours may form explosive mixture with air.

#### **SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -**

Acute toxicity

LD50 Oral - rat - 5,045 mg/kg

Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Somnolence (general depressed activity).

LC50 Inhalation - rat - 8 h - 16000 ppm

LD50 Dermal - rabbit - 12,800 mg/kg

Irritation and corrosion

Skin - rabbit - Mild skin irritation

Eyes - rabbit - Eye irritation - 24 h

Sensitisation

no data available

Chronic exposure

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Propan-2-ol)  
Signs and Symptoms of Exposure  
Central nervous system depression, prolonged or repeated exposure can cause: Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects.  
Potential Health Effects  
Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.  
Skin May be harmful if absorbed through skin. Causes skin irritation.  
Eyes Causes eye irritation.  
Ingestion May be harmful if swallowed.  
Target Organs Gastrointestinal tract, Liver, Cardiovascular system., Kidney, Nerves.,  
Additional Information  
RTECS: NT8050000

**SECTION 12. ----- ECOLOGICAL INFORMATION -----**

Elimination information (persistence and degradability)  
no data available  
Ecotoxicity effects  
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h  
Toxicity to daphnia and other aquatic invertebrates.  
EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h  
Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h  
Toxicity to algae EC50 - Scenedesmus subspicatus - > 2,000.00 mg/l - 72 h  
EC50 - No information available. - > 1,000.00 mg/l - 24 h  
Further information on ecology  
no data available

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

Product  
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.  
Contaminated packaging  
Dispose of as unused product.

**SECTION 14. ----- TRANSPORT INFORMATION -----**

DOT (US)  
UN-Number: 1219 Class: 3 Packing group: II  
Proper shipping name: Isopropanol  
Marine pollutant: No  
Poison Inhalation Hazard: No  
IMDG  
UN-Number: 1219 Class: 3 Packing group: II EMS-No: F-E, S-D  
Proper shipping name: ISOPROPANOL  
Marine pollutant: No  
IATA  
UN-Number: 1219 Class: 3 Packing group: II  
Proper shipping name: Isopropanol

**SECTION 15. ----- REGULATORY INFORMATION -----**

DSL Status  
All components of this product are on the Canadian DSL list.  
WHMIS Classification  
B2  
D2B

Flammable Liquid Flammable Liquid  
Moderate eye irritant

**SECTION 16. ----- OTHER INFORMATION-----**

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product