

## Material Safety Data Sheet

### 2-Propanol

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

2-Propanol

**Catalog Numbers:**

BW933005, BW961505, BW961506, BW961511, BW961512, BW962005, BW962006, BW962305, BW962320, BW9623200, BW962503, BW962504, BW962505, BW962506, BW962507, BW962508, BW962520, BW9625200, BW962605, BW962606, BW962620, BW963005, BW963006

**Synonyms:**

Isopropanol; Dimethylcarbinol; sec-Propyl alcohol; Rubbing alcohol; Petrohol; 1-Methylethanol; 1-Methylethyl alcohol; 2-Hydroxypropane; 2-Propyl alcohol; Isopropyl alcohol; Propan-2-ol; Propol

**Company Identification:**

Bridgewater Chemical  
 Somerville, NJ 08876

**Company Phone Number:**

(800) 537-9133

**Emergency Phone Number:**

(800) 255-3924

**CHEMTREC Phone Number, US:**

(800) 424-9300

**CHEMTREC Phone Number, Europe:**

(202) 483-7616

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ELINCS
67-63-0	2-Propanol	100.0	200-661-7

Hazard Symbols: F



Risk Phrases: 11

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Appearance: colorless liquid*

*Warning! Flammable liquid. May form explosive peroxides. Mutagen. Hygroscopic. Causes mild skin irritation. Causes digestive and respiratory tract irritation. May cause severe eye irritation and possible injury. May cause central nervous system depression. May cause kidney damage. This substance has caused adverse reproductive and fetal effects in animals. Possible sensitizer. Flash Point: 12°C.*

*Target Organs: kidneys, central nervous system, cardiovascular system.*

**Material Safety Data Sheet****2-Propanol****Potential Health Effects****Eye:**

Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury.

**Skin:**

May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May be absorbed through the skin. May cause irritation with pain and stinging, especially if the skin is abraded.

**Ingestion:**

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

**Inhalation:**

Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation. Causes upper respiratory tract irritation.

**Chronic:**

Prolonged or repeated skin contact may cause defatting and dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. May cause allergic skin reaction in some individuals.

**Section 4 - First Aid Measures****Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:**

Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:**

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:**

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:**

Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication. Treat symptomatically and supportively.

**Section 5 - Fire Fighting Measures****General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable Liquid. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:**

Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

**NFPA Rating:**

(estimated) Health: 1; Flammability: 3; Reactivity: 0

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### Section 6 - Accidental Release Measures

#### General Information:

Use proper personal protective equipment as indicated in Section 8.

#### Spills/Leaks:

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

### Section 7 - Handling and Storage

#### Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Loosen closure cautiously before opening. Contents may develop pressure upon prolonged storage. Avoid contact with eyes, skin, and clothing. Do not breathe dust, vapor, mist, or gas. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

#### Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Do not store in direct sunlight. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture.

### Section 8 - Exposure Controls, Personal Protection

#### Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

#### Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
2-Propanol	400 ppm TWA; 983 mg/m <sup>3</sup> TWA ;500 ppm STEL; 1230 mg/m <sup>3</sup> STEL	400 ppm TWA; 980 mg/m <sup>3</sup> TWA 2000 ppm IDLH (lower explosive limit)	400 ppm TWA; 980 mg/m <sup>3</sup> TWA ;

#### OSHA Vacated PELs

2-Propanol: 400 ppm TWA; 980 mg/m<sup>3</sup> TWA

### Personal Protective Equipment

#### Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin:

Wear appropriate protective gloves to prevent skin exposure.

#### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

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### Respirators:

A respiratory protection program that meets OSHA's 29 CFR §1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Liquid
<b>Color:</b>	colorless liquid
<b>Odor:</b>	solvent odor - alcohol-like
<b>Odor threshold value:</b>	43 ppm (detectable); 19 ppm (recognizable)
<b>pH:</b>	No information found.
<b>Vapor Pressure:</b>	33 mm Hg @ 20C
<b>Vapor Density:</b>	2.1 (air=1)
<b>Evaporation Rate:</b>	2.3 (n-butyl acetate=1)
<b>Viscosity:</b>	2.27 mPas @ 20C
<b>Boiling Point:</b>	82°C @ 760 mmHg
<b>Freezing/Melting Point:</b>	-88°C
<b>Autoignition Temperature:</b>	459°C ( 858.20°F)
<b>Explosion Limits:</b>	Lower: 2.5 vol %      Upper: 12.1 vol %
<b>Flash Point:</b>	12°C ( 53.60°F)
<b>Decomposition Temperature:</b>	No information found.
<b>Solubility in water:</b>	Miscible.
<b>Specific Gravity/Density:</b>	0.7850 (water=1)
<b>Molecular Formula:</b>	C3H8O
<b>Molecular Weight</b>	60.0554

## Section 10 - Stability and Reactivity

### Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions. Distillation may lead to the formation of peroxides. This material may be sensitive to peroxide formation.

### Conditions to Avoid:

Incompatible materials, light, ignition sources, acids, excess heat, exposure to moist air or water, oxidizers.

### Incompatibilities with Other Materials

acids, amines, ethylene oxide, halogens, permanganates, sulfuric acid, oxygen, isocyanates, hydrogen peroxides, acetaldehyde, halogenated organics (e.g. dibromoethane, hexachlorobenzene, methyl chloride, trichloroethylene), ketones (e.g. acetone, acetophenone, MEK, MIBK), acid anhydrides, oleum, chromium trioxide, alkalies, chlorine, carbonyl dichloride(phosgene), iron salts, perchloric acid, potassium-tert-butoxide, moisture, Attacks some forms of plastics, rubbers, and coatings., aluminum isopropoxide + crotonaldehyde + heat, trinitromethane, barium perchlorate, dioxygenyl tetrafluoroborate, sodium dichromate + sulfuric acid, hydrogen + palladium, urea formaldehyde, aldehydes, hexamethylene diisocyanate, hypochlorous acid, aluminum at high temperatures.

### Hazardous Decomposition Products

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

### Hazardous Polymerization

**Material Safety Data Sheet**  
**2-Propanol****Section 11 - Toxicological Information****RTECS:**

CAS# 67-63-0: NT8050000.

**LD50/LC50:**

CAS# 67-63-0:

Oral, mouse: LD50 = 3600 mg/kg

Oral, rabbit: LD50 = 6410 mg/kg

Oral, rat: LD50 = 5045 mg/kg

Skin, rabbit: LD50 = 12800 mg/kg.

**Carcinogenicity:**

CAS# 67-63-0

ACGIH: Not listed.

California: Not listed.

NIOSH: Not listed.

NTP: Not listed.

OSHA: Not listed.

IARC: Group 3 carcinogen

**Epidemiology:**

Experimental teratogenic and reproductive effects have been reported for isopropanol. Early epidemiological studies have suggested an association between the strong acid manufacture of isopropyl alcohol and paranasal sinus cancer in workers.

**Teratogenicity:**

Oral, rat: TDLo = 8 gm/kg (female 6-15 day(s) after conception) Effects on Embryo or Fetus - fetotoxicity.; Oral, rat: TDLo = 32400 ug/kg (female 26 week(s) pre-mating) Effects on Embryo or Fetus - fetal death.; Inhalation, rat: TCLo = 7000 ppm/7H (female 1-19 day(s) after conception) Specific Developmental Abnormalities - musculoskeletal system.

**Reproductive:**

Oral, rat: TDLo = 11340 mg/kg (female 45 day(s) pre-mating) Maternal Effects - menstrual cycle changes or disorders.; Oral, rat: TDLo = 5040 mg/kg (female 1-20 day(s) after conception) Fertility - litter size (e.g. # fetuses per litter; measured before birth).

**Mutagenicity**Cytogenetic analysis: Inhalation, rat = 1030 ug/m<sup>3</sup>/16W (Intermittent).**Neurotoxicity**

No information found.

**Other:**

Standard Draize Test: Administration onto the skin (rabbit) = 500 mg (Mild). Standard Draize Test: Administration into the eye (rabbit) = 100 mg (Moderate). Standard Draize Test: Administration into the eye = 10 mg (Moderate). Standard Draize test: Administration into the eye (rabbit) = 100 mg/24H (Moderate).

**Section 12 - Ecological Information****Ecotoxicity:**

Fish: Goldfish: &gt; 5000 mg/L; 24 Hr; Modified ASTM D 1345 bioassay

Fish: Fathead Minnow: 11,830 mg/L; 1 Hr; Static bioassay



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### Environmental:

2-Propanol is not expected to adsorb to sediment or bioconcentrate in fish. In the atmosphere, it will photodegrade primarily by the reaction with hydroxyl radicals with a half-life of one to several days. Due to its solubility in water rainout may be significant. 2-Propanol is expected to evaporate quickly from the soil surface and leach into the ground. It is predicted to volatilize in aquatic environments with a half-life of 5.4 days and may biodegrade.

### Physical:

No information available.

### Other:

Dangerous to aquatic life in high concentrations.

## Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### RCRA P Series Wastes

None of the components are on this list.

### RCRA U Series Wastes

None of the components are on this list.

## Section 14 - Transport Information

	US DOT	IATA	IMO	RID/ADR	Canadian TDG
<b>Shipping Name:</b>	ISOPROPANOL	Not regulated as a hazardous material.	Not regulated as a hazardous material.	Not regulated as a hazardous material.	No information found.
<b>Hazard Class:</b>	3				
<b>UN Number:</b>	UN1219				
<b>Packing Group:</b>	II				

## Section 15 - Regulatory Information

### US Federal

#### TSCA

CAS# 67-63-0 is listed on the TSCA Inventory.

#### Health and Safety Reporting List

CAS# 67-63-0: Effective Date: December 15, 1986; Sunset Date: December 15, 1996

#### Chemical Test Rules

CAS# 67-63-0: Testing required by: manufacturers; importers; processors (40 CFR 799.2325)

#### TSCA Section 12b

CAS# 67-63-0: export notification required - Section 4

#### TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

#### CERCLA Reportable Quantities (RQ)

None of the components are on this list.

#### SARA Threshold Planning Quantities (TPQ)

None of the components are on this list.

**Material Safety Data Sheet****2-Propanol****SARA Hazard Categories**

CAS# 67-63-0: acute, chronic, flammable.

**SARA Section 313**

This material contains 2-Propanol (CAS# 67-63-0, 100.0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

**Clean Air Act - Hazardous Air Pollutants (HAPs)**

None of the components are on this list.

**Clean Air Act - Class 1 Ozone Depleters**

None of the components are on this list.

**Clean Air Act - Class 2 Ozone Depleters**

None of the components are on this list.

**Clean Water Act - Hazardous Substances**

None of the components are on this list.

**Clean Water Act - Priority Pollutants**

None of the components are on this list.

**Clean Water Act - Toxic Pollutants**

None of the components are on this list.

**OSHA - Highly Hazardous**

None of the components are on this list.

**OSHA - Specifically Regulated Chemicals****US State****State Right to Know**

2-Propanol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

**California Prop 65****California No Significant Risk Level**

No information found.

**European/International Regulations****European Labelling in Accordance with EC Directives:**

Hazard Symbols: F

Risk Phrases: R 11 Highly flammable.

Safety Phrases: S 7 Keep container tightly closed.

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

**WGK (Water Danger/Protection)**

No information found.

**United Kingdom Occupational Exposure Limits**

No information found.

**Canadian DSL/NDSL**

CAS# 67-63-0 is listed on Canada's DSL/NDSL List.

**Canadian WHMIS Classifications**

This product has a WHMIS classification of B2, D2A.

**Canada Ingredient Disclosure List**

CAS# 67-63-0 is not listed on Canada's Ingredient Disclosure List.



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#### Exposure Limits

CAS# 67-63-0: OEL-AUSTRALIA:TWA 400 ppm (980 mg/m<sup>3</sup>);STEL 500 ppm (1225 mg/m<sup>3</sup>)  
OEL-BELGIUM:TWA 400 ppm (985 mg/m<sup>3</sup>);STEL 500 ppm (1230 mg/m<sup>3</sup>)  
OEL-DENMARK:TWA 200 ppm (490 mg/m<sup>3</sup>);Skin  
OEL-FRANCE:STEL 400 ppm (980 mg/m<sup>3</sup>)  
OEL-GERMANY:TWA 400 ppm (980 mg/m<sup>3</sup>)  
OEL-JAPAN:STEL 400 ppm (980 mg/m<sup>3</sup>)  
OEL-THE NETHERLANDS:TWA 400 ppm (980 mg/m<sup>3</sup>);Skin  
OEL-THE PHILIPPINES:TWA 400 ppm (980 mg/m<sup>3</sup>)  
OEL-RUSSIA:STEL 400 ppm (10 mg/m<sup>3</sup>)  
OEL-SWEDEN:TWA 150 ppm (350 mg/m<sup>3</sup>);STEL 250 ppm (600 mg/m<sup>3</sup>)  
OEL-SWITZERLAND:TWA 400 ppm (980 mg/m<sup>3</sup>);STEL 800 ppm  
OEL-TURKEY:TWA 200 ppm (500 mg/m<sup>3</sup>)  
OEL-UNITED KINGDOM:TWA 400 ppm (980 mg/m<sup>3</sup>);STEL 500 ppm;Skin  
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV  
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

#### Section 16 - Other Information

No information found.  
MSDS Creation Date: July 23, 1999  
Revision Date: Original.

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