

Safety Data Sheet

File version: 1

Propanol-2, 100%(v/v)

SDS Date: 06 Dec 2016

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 100%(v/v) 2-Propanol
SYNONYMS: sec-Propyl alcohol
Isopropyl alcohol
Isopropanol
PRODUCT CODES: 1008424
1008425
MANUFACTURER: Rigaku Reagents
ADDRESS: 9009 New Trails Drive
The Woodlands, TX 77381
USA
PHONE: +1 (281) 362-2300 x 502
EMAIL: ReagentOrders@Rigaku.com

CHEMICAL NAME: 2-Propanol
CHEMICAL FORMULA: C₃H₈O

PREPARED BY: Rigaku Reagents

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

OSHA HAZARDS: Flammable liquid, target organ effect, irritant

TARGET ORGANS: Nerves, kidney, cardiovascular system, gastrointestinal tract, liver

GHS CLASSIFICATION:

Flammable liquids (Category 2)
Skin irritation (Category 3)
Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Signal word: Danger

Hazard statement(s):

H225 Highly flammable liquid and vapor.
H316 Causes mild skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statement(s):

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

POTENTIAL HEALTH EFFECTS:

EYES: Causes eye irritation.

SKIN: May be harmful if absorbed through skin. Causes skin irritation.

INGESTION: May be harmful if swallowed.

INHALATION: May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.

SECTION 2 NOTES:

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS: 2-Propanol

<u>2-PROPANOL:</u>		
<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>
67-63-0		≤100
	<u>ppm</u>	<u>mg/m3</u>
OSHA PEL-TWA:	400	980
OSHA PEL STEL :	500	1225
ACGIH TLV-TWA:	200	
ACGIH TLV STEL:	400	

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.**SKIN:** Wash off with soap and plenty of water. Consult a physician.**INGESTION:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.**INHALATION:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.**SECTION 4 NOTES:**

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT:

F: 53.6 °

C: 12.0 °

AUTOIGNITION TEMPERATURE:

F: 797.0 °

C: 425.0 °

NFPA HAZARD CLASSIFICATION

HEALTH: 2

FLAMMABILITY: 3

REACTIVITY: 0

HMIS HAZARD CLASSIFICATION

HEALTH: 2

FLAMMABILITY: 3

REACTIVITY: 0

EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Carbon oxides,**SECTION 5 NOTES:** Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking. 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 vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. 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. Handle and store under inert gas. Hygroscopic.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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).

EYE PROTECTION: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

SKIN PROTECTION: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: clear, colorless

PHYSICAL STATE: liquid, clear

pH AS SUPPLIED: No data available

pH (Other): No data available

BOILING POINT:

F: 180 °

C: 82 °

FREEZING POINT:

F: -129.1 °

C: -89.5 °

VAPOR PRESSURE (mmHg): 32.4 mmHg

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F: 68 °

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C: 20 °

VAPOR DENSITY (AIR = 1): 2.63

SPECIFIC GRAVITY (H₂O = 1): 0.785

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F: 77 °

C: 25 °

EVAPORATION RATE: 3.0

SOLUBILITY IN WATER: Completely soluble

VISCOSITY: No data available

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F: No data available

C: No data available

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions. Vapors may form explosive mixture with air.**CONDITIONS TO AVOID (STABILITY):** Heat, flames and sparks. Extremes of temperature and direct sunlight.**INCOMPATIBILITY (MATERIAL TO AVOID):** Oxidizing agents, acid anhydrides, aluminium, halogenated compounds, acids**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Carbon oxides. Other decomposition products - no data available

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:**ORAL LD50:** Rat - 5,045 mg/kg. Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Somnolence (general depressed activity).**INHALATION LC50:** Rat - 8 h - 16000 ppm**DERMAL LD50:** Rabbit - 12,800 mg/kg**SKIN CORROSION/IRRITATION:** Rabbit - Mild skin irritation**SERIOUS EYE DAMAGE/EYE IRRITATION:** Rabbit - Eye irritation - 24 h**RESPIRATORY OR SKIN SENSITIZATION:** No data available**GERM CELL MUTAGENICITY:** No data available**CARCINOGENICITY:****IARC:** 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**REPRODUCTIVE TOXICITY:** No data available**SECTION 11 NOTES:** 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.

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SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:**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; Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h**TOXICITY TO ALGAE:** EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h; EC50 - Algae - > 1,000.00 mg/l - 24 h**PERSISTENCE AND DEGRADABILITY**

No data available

BIOACCUMULATIVE POTENTIAL

No data available

MOBILITY IN SOIL

No data available

PBT AND vPvB ASSESSMENT

No data available

SECTION 12 NOTES:

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. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

CONTAMINATED PACKAGING: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Isopropanol
HAZARD CLASS: 3
ID NUMBER: 1219
PACKING GROUP: II
MARINE POLLUTANT: No
POISON INHALATION HAZARD: No

WATER TRANSPORTATION

PROPER SHIPPING NAME: ISOPROPANOL
HAZARD CLASS: 3
ID NUMBER: 1219
PACKING GROUP: II EMS-No: F-E, S-D
MARINE POLLUTANT: No

AIR TRANSPORTATION

PROPER SHIPPING NAME: Isopropanol
HAZARD CLASS: 3
ID NUMBER: 1219
PACKING GROUP: II

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

OSHA HAZARDS: Flammable liquid, target organ effect, irritant

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SARA 302 COMPONENTS: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 COMPONENTS: The following components are subject to reporting levels established by SARA Title III, Section 313:

	<u>CAS-No.</u>
2-Propanol	67-63-0

SARA 311/312 HAZARDS: Fire hazard, acute health hazard, chronic health hazard

MASSACHUSETTS RIGHT TO KNOW COMPONENTS:

	<u>CAS-No.</u>
2-Propanol	67-63-0

PENNSYLVANIA RIGHT TO KNOW COMPONENTS:

	<u>CAS-No.</u>
2-Propanol	67-63-0

NEW JERSEY RIGHT TO KNOW COMPONENTS:

	<u>CAS-No.</u>
2-Propanol	67-63-0

CALIFORNIA PROP. 65 COMPONENTS: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

DISCLAIMER: The above information is believed to be correct but does not necessarily include all information and should be used only as a guide. The information in this document is based on our current knowledge and applies to the product with regard to appropriate safety precautions. This document does not represent any guarantee of the properties of the product. Rigaku Reagents will not be held liable for any damage resulting from handling or contact with the above product.