



SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 04/28/2014

Version 1.2

SECTION 1. Identification

Product identifier

Product number	137040
Product name	2-Propranol 70% (V/V) 0.1 µm-filtred suitable for the biopharmaceutical production USP

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Pharmaceutical production
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Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 290 Concord Road, Billerica, MA 01821, United States of America General Inquiries: +1-978-715-4321 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification

GHS Classification

Flammable liquid, Category 2, H225
Eye irritation, Category 2, H319
Specific target organ systemic toxicity - single exposure, Category 3, H336
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word

Danger

Hazard Statements

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

SAFETY DATA SHEET

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Precautionary Statements

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

P233 Keep container tightly closed.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS and may deviate from the GHS information.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

2-Propanol (>= 70 % - < 90 %)

67-63-0

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air. Consult doctor if feeling unwell.

Skin contact

After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Ingestion

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, respiratory paralysis, Drowsiness, Dizziness, Unconsciousness, narcosis, inebriation, Headache, drowsiness, Coma

Indication of any immediate medical attention and special treatment needed

No information available.

SAFETY DATA SHEET

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Product number	137040	Version 1.2
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SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Combustible material

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

Pay attention to flashback.

Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Cool closed containers exposed to fire with water spray. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapors, aerosols.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains. Risk of explosion.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Observe label precautions.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number 137040 Version 1.2
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Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Keep away from heat and sources of ignition.
Keep container tightly closed in a dry and well-ventilated place.

Storage temperature: no restrictions.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
<i>2-Propanol 67-63-0</i>			
ACGIH	Time Weighted Average (TWA):	200 ppm	
	Short Term Exposure Limit (STEL):	400 ppm	
NIOSH/GUIDE	Recommended exposure limit (REL):	400 ppm 980 mg/m ³	
	Short Term Exposure Limit (STEL):	500 ppm 1,225 mg/m ³	
OSHA_TRANS	PEL:	400 ppm 980 mg/m ³	
Z1A	Short Term Exposure Limit (STEL):	500 ppm 1,225 mg/m ³	
	Time Weighted Average (TWA):	400 ppm 980 mg/m ³	

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

Flame retardant antistatic protective clothing

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Product number	137040	Version 1.2
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Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	characteristic
Odor Threshold	No information available.
pH	at 68 °F (20 °C) neutral
Melting point	No information available.
Boiling point	No information available.
Flash point	ca. 64 °F (18 °C) Method: DIN 51755 Part 1
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	2 %(V) (2-Propanol)
Upper explosion limit	13.4 %(V) (2-Propanol)
Vapor pressure	ca.42 hPa at 68 °F (20 °C)
Relative vapor density	No information available.
Density	0.85 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble

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Partition coefficient: n-octanol/water	log Pow: 0.05 OECD Test Guideline 107 (2-Propanol) Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.
Ignition temperature	ca. 797 °F (425 °C)

SECTION 10. Stability and reactivity

Reactivity

Vapors may form explosive mixture with air.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapors with:

Alkali metals, Alkaline earth metals, powdered aluminum

Exothermic reaction with:

Oxidizing agents, Aldehydes, Amines, fuming sulfuric acid, Iron, Nitric acid

Risk of explosion with:

chlorates, Phosgene, organic nitro compounds, hydrogen peroxide, nitrogen oxides

Conditions to avoid

Warming.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Incompatible materials

various plastics, rubber

Hazardous decomposition products

no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Inhalation, Eye contact, Skin contact

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

137040

Version 1.2

Product name

2-Propanol 70% (V/V) 0.1 µm-filtred suitable for the biopharmaceutical production USP

Target Organs

Eyes

Skin

Respiratory system

Skin irritation

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Eye irritation

Mixture causes serious eye irritation.

Specific target organ systemic toxicity - single exposure

Mixture may cause drowsiness or dizziness.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Systemic effects:

After absorption:

Headache, Dizziness, inebriation, Unconsciousness, narcosis

After uptake of large quantities:

respiratory paralysis, Coma

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Ingredients

2-Propanol

SAFETY DATA SHEET

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Product number 137040

Version 1.2

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Acute oral toxicity

LDLO human: 3,570 mg/kg (RTECS)

LD50 rat: 5,045 mg/kg (RTECS)

Acute inhalation toxicity

LC50 rat: 46.5 mg/l; 4 h (External MSDS)

Acute dermal toxicity

LD50 rabbit: 12,800 mg/kg (RTECS)

Eye irritation

rabbit

Result: Eye irritation

(RTECS)

Sensitization

Sensitization test: guinea pig

Result: negative

(IUCLID)

Germ cell mutagenicity

Genotoxicity in vivo

Mutagenicity (mammal cell test): micronucleus.

Result: negative

(IUCLID)

Genotoxicity in vitro

Ames test

Result: negative

(IUCLID)

Carcinogenicity

Did not show carcinogenic effects in animal experiments. (IUCLID)

Reproductive toxicity

No impairment of reproductive performance in animal experiments. (IUCLID)

Teratogenicity

Did not show teratogenic effects in animal experiments. (IUCLID)

SECTION 12. Ecological information

Ecotoxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 0.05

OECD Test Guideline 107

(2-Propanol) Bioaccumulation is not expected.

Mobility in soil

No information available.

Ingredients

2-Propanol

SAFETY DATA SHEET

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Product number 137040 Version 1.2
Product name 2-Propanol 70% (V/V) 0.1 µm-filtred suitable for the biopharmaceutical production USP

Toxicity to fish

LC50 *Lepomis macrochirus* (Bluegill sunfish): 1,400 mg/l; 96 h (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 *E.sulcatum*: 4,930 mg/l; 72 h (maximum permissible toxic concentration) (Lit.)

EC50 *Daphnia magna* (Water flea): 13,299 mg/l; 48 h (IUCLID)

Toxicity to algae

IC50 *Desmodesmus subspicatus* (green algae): > 1,000 mg/l; 72 h (IUCLID)

Toxicity to bacteria

EC50 *Pseudomonas putida*: 1,050 mg/l; 16 h (Lit.)

Biodegradability

95 %; 21 d

OECD Test Guideline 301E

Readily biodegradable.

Theoretical oxygen demand (ThOD)

2,400 mg/g

(Lit.)

Ratio BOD/ThBOD

BOD5 49 %

(IUCLID)

Ratio COD/ThBOD

96 %

(Lit.)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number	UN 1219
Proper shipping name	ISOPROPANOL SOLUTION
Class	3
Packing group	II
Environmentally hazardous	--

Air transport (IATA)

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UN number	UN 1219
Proper shipping name	ISOPROPANOL SOLUTION
Class	3
Packing group	II
Environmentally hazardous	--
Special precautions for user	no

Sea transport (IMDG)

UN number	UN 1219
Proper shipping name	ISOPROPANOL SOLUTION
Class	3
Packing group	II
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-E S-D

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Flammable Liquid
Target organ effects
Eye irritant

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313

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

Ingredients

2-Propanol	67-63-0	70 %
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SARA 302

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

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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Ingredients

2-Propanol

Pennsylvania Right To Know

Ingredients

2-Propanol

water

New Jersey Right To Know

Ingredients

2-Propanol

water

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

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

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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