

# Safety Data Sheet

According to Hazardous Products Regulation (SOR/2015-17)

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## SECTION 1: Identification

### Product identifier

Trade name/designation:	70% Reagent Grade Alcohol
Product No.:	89370-078
Synonymes:	none
CAS No.:	not applicable
Other means of identification:	

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

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

### Details of the supplier of the safety data sheet

#### Supplier

##### **VWR International**

Street	2360 Argentia Road
Postal code/City	Mississauga, Ontario Canada L5N 5Z7
Telephone	+1-800-932-5000 toll-free within US/Canada
Telefax:	+1-610-728-2103

### Emergency phone number

Telephone +1-613-996-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)

### Preparation Information

VWR International - Product Information Compliance

E-mail SDS@avantorsciences.com

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

#### Classification according to Hazardous Products Regulation (SOR/2015-17)

Hazard classes and hazard categories	Hazard statements
Flammable liquid, category 2	H225
Eye irritation, category 2	H319
Specific target organ toxicity (single exposure), category 2	H371

### 2.2 Label elements

#### Labelling in accordance with (SOR/2015-17)

#### Hazard pictograms



Signal word: Danger

Hazard statements	
H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H371	May cause damage to organs.

Precautionary statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/...
P403+P235	Store in a well-ventilated place. Keep cool.

#### Hazards not otherwise classified (HNOC)

none

## SECTION 3: Composition / information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

Hazardous ingredients GHS Classification in accordance with (SOR/2015-17)

Substance name	Concentration	Identifier	Hazard classes and hazard categories
Ethanol absolut	65 - 75%	CAS No.: 64-17-5	Flam. Liq. 2 - H225 Eye Irrit. 2 - H319
2-Propanol	3 - 6%	CAS No.: 67-63-0	Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336
Methanol	2.5 - 4.5%	CAS No.: 67-56-1	Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Eye Irrit. 2 - H319 Repr. 1B - H360 STOT SE 2 - H371 STOT SE 3 - H336

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

#### In case of inhalation

Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

#### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

#### After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

#### In case of ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

#### Self-protection of the first aider

First aider: Pay attention to self-protection!

### 4.2 Most important symptoms/effects, acute and delayed

no data available

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## SECTION 5: Fire fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray  
ABC-powder  
Carbon dioxide (CO<sub>2</sub>)  
Nitrogen

#### Extinguishing media which must not be used for safety reasons

no restriction

### 5.2 Specific hazards arising from the chemical

In case of fire may be liberated:  
Pyrolysis products, toxic

### 5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.  
Protective equipment and precautions for firefighters:  
Wear a self-contained breathing apparatus and chemical protective clothing.

#### Additional information

Do not allow run-off from fire-fighting to enter drains or water courses.  
Do not inhale explosion and combustion gases.  
Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.  
Use water spray/stream to protect personnel and to cool endangered containers.  
In case of fire: Evacuate area.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Use personal protection equipment. Special danger of slipping by leaking/spilling product. In case of major fire and large quantities: Remove persons to safety. Wear a self-contained breathing apparatus and chemical protective clothing.

### 6.2 Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

### 6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Clean contaminated articles and floor according to the environmental legislation. Collect in closed and suitable containers for disposal.

### 6.4 Additional information

Clear spills immediately.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

All work processes must always be designed so that the following is as low as possible:

Inhalation  
skin contact  
Eye contact

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

### 7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: no data available

Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
2-Propanol	CNESST	CA	VECD	1230 mg/m <sup>3</sup> - 500 ppm
2-Propanol	CNESST	CA	VEMP	983 mg/m <sup>3</sup> - 400 ppm
Methanol	CNESST	CA	VECD	328 mg/m <sup>3</sup> - 250 ppm
Methanol	CNESST	CA	VEMP	262 mg/m <sup>3</sup> - 200 ppm

### 8.2 Engineering controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

#### *Eye/face protection*

Eye glasses with side protection

#### *Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

#### *Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

*Additional information*

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

*Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odor:	no data available
(c) Odor threshold:	no data available

#### Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	-114 °C
(f) Initial boiling point and boiling range:	78 °C (1013 hPa)
(g) Flash point:	22 °C (closed cup)
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	Highly flammable liquid and vapor.
(j) Flammability or explosive limits	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
(k) Vapor pressure:	no data available
(l) Vapor density:	no data available
(m) Density:	0.785 g/cm <sup>3</sup> (20 °C)
(n) Solubility(ies)	
Water solubility:	no data available
(o) Partition coefficient: n-octanol/water:	no data available
(p) Auto-ignition temperature:	363 °C
(q) Decomposition temperature:	not applicable
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable
(u) Particle characteristics:	does not apply to liquids

### 9.2 Other information

Bulk density:	no data available
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapors may form explosive mixtures with air.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

Formation of explosive mixtures with:

Oxidising agent

Nitrogen oxides (NO<sub>x</sub>)

Material, oxygen-rich, Oxidizing

Nitric acid

Chlorine

Bromine

Exothermic reaction with:

Reducing agent

Acid

Acid halides

Alkali (lye), concentrated

Violent reaction with:

Alkali metals

Alkaline earth metal

Formation of:

Hydrogen

### 10.4 Conditions to avoid

UV-radiation/sunlight

Heat

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

### 10.5 Incompatible materials

light metals

Plastic articles

### 10.6 Hazardous decomposition products

no data available

### 10.7 Additional information

Slowly corrodes aluminium and zinc under hydrogen evolution.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

### **Acute effects**

#### *Acute oral toxicity:*

Ethanol absolut - LD50: > 6200 mg/kg - Rat - (Merck KGaA)

2-Propanol - LD50: > 5045 mg/kg - Rat - (RTECS)

2-Propanol - LDLo: > 3570 mg/kg - Human - (RTECS)

Methanol - LDLo: > 143 mg/kg - Human - (RTECS)

Methanol - LD50: 1187 - 2769 mg/kg - Rat - (IUCLID)

Methanol - LD50: 1187 - 2769 mg/kg - Rat - (OECD 401)

#### *Acute dermal toxicity:*

Ethanol absolut - LD50: < 20000 mg/kg - Rabbit - (CHP)

2-Propanol - LD50: > 12800 mg/kg - Rabbit - (RTECS)

Methanol - LD50: > 15800 mg/kg - Rabbit

Methanol - LD50: 17100 mg/kg - Rabbit - (ECHA)

#### *Acute inhalation toxicity:*

Ethanol absolut - LC50: < 8000 mg/l (4 h) - Rat - (CHP)

2-Propanol - LC50: 72600 mg/m<sup>3</sup> - Rat - (Japan GHS Basis for Classification Data)

Methanol - TCLo: > 160 ppm (4 h) - Human

Methanol - LD50: 43700 mg/m<sup>3</sup> (6 h) - Cat - (J Appl Toxicol 14(4): 309-313)

### **Irritant and corrosive effects**

#### *Primary irritation to the skin:*

not applicable

#### *Irritation to eyes:*

Causes serious eye irritation.

#### *Irritation to respiratory tract:*

not applicable

### **Respiratory or skin sensitization**

In case of skin contact: not sensitizing

In case of inhalation: not sensitizing

### **STOT-single exposure**

May cause damage to organs.

### **STOT-repeated exposure**

not applicable



**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Carcinogenicity**

No indication of human carcinogenicity.

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**Additional information**

no data available

## SECTION 12: Ecological information

### 12.1 Ecotoxicity

**Fish toxicity:**

Ethanol absolut - LC50: 11200 mg/l (96 h) *Salmo gairdneri* - ECHA

2-Propanol - LC50: 9640 mg/l (96 h) - Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott 1984. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Vol. 1. Center for Lake Superior Environmental Stud., Univ. of Wisconsin-Superior, Superior, WI :414

Methanol - LC50: 24000 mg/l (96 h) - Poirier, S.H., M.L. Knuth, C.D. Anderson-Buchou, L.T. Brooke, A.R. Lima, and P.J. Shubat 1986. Comparative Toxicity of Methanol and N,N-Dimethylformamide to Freshwater Fish and Invertebrates. Bull. Environ. Contam. Toxicol. 37(4):615-621

**Daphnia toxicity:**

Ethanol absolut - LC50: 5012 mg/l (48 h) *Ceriodaphnia dubia* - ECHA

Ethanol absolut - NOEC: 9.6 mg/l (10 d) *Daphnia magna* - ECHA

2-Propanol - LC50: 1400 mg/l (48 h) - Blackman, R.A.A. 1974. Toxicity of Oil-Sinking Agents. Mar. Pollut. Bull. 5:116-118

Methanol - LC50: 3290 mg/l (48 h) - Guilhermino, L., T. Diamantino, M.C. Silva, and A.M.V.M. Soares 2000. Acute Toxicity Test with *Daphnia magna*: An Alternative to Mammals in the Prescreening of Chemical Toxicity?. Ecotoxicol. Environ. Saf. 46(3):357-362

Methanol - EC50: 24500 mg/l (48 h) - Randall, T.L., and P.V. Knopp 1980. Detoxification of Specific Organic Substances by Wet Oxidation. J. Water Pollut. Control Fed. 52(8):2117-2130

**Algae toxicity:**

Ethanol absolut - EC50: 275 mg/l (72 h) *Chlorella vulgaris* - ECHA

Methanol - EC50: 22 000 mg/l (96 h) *Pseudokirchneriella subcapitata* - IUCLID

**Bacteria toxicity:**  
no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

### 12.4 Mobility in soil:

no data available

### 12.5 Results of PBT/vPvB assessment

not applicable

### 12.6 Other adverse effects

no data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Appropriate disposal / Product**

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: no data available

**Appropriate disposal / Package**

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

**Additional information**

no data available

## SECTION 14: Transport information

### Land transport (TDG)

UN-No.:	1987
Proper Shipping Name:	ALCOHOLS, N.O.S. (ETHANOL / 2-PROPANOL / METHANOL)
Class(es):	3
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

### Sea transport (IMDG)

UN-No.:	1987
Proper Shipping Name:	ALCOHOLS, N.O.S. (ETHANOL / 2-PROPANOL / METHANOL)

Class(es):	3
Classification code:	
Hazard label(s):	3
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	
Segregation group:	-
EmS-No.	F-E S-D
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
not relevant	

### Air transport (ICAO-TI / IATA-DGR)

UN-No.:	1987
Proper Shipping Name:	ALCOHOLS, N.O.S. (ETHANOL / 2-PROPANOL / METHANOL)
Class(es):	3
Classification code:	
Hazard label(s):	3
Packing group:	II
Special precautions for user:	

## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Domestic Substance List:

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
DOT - Department of Transportation  
IARC - International Agency for Research on Cancer  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
PEL - Permissible Exposure Limit  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods  
TLV - Threshold Limit Value  
vPvB - very Persistent, very Bioaccumulative

### Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

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### Additional information

Indication of changes                      Section 8: Update of DNEL and/or PNEC data

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

*The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state 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. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.*