

## SAFETY DATA SHEET

## Denatured Ethanol 99,5 % (denatured with Isopropanol)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## 1.1. Product identifier

## ▼ Trade name

Denatured Ethanol 99,5 % (denatured with Isopropanol)

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

## Relevant identified uses of the substance or mixture

Solvent - Industrial purposes.

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

## Company and address

Solveco AB  
Tallbacksgatan 10  
S-195 72 Rosersberg  
Sverige  
T: +46 (0)8 732 72 75  
F: +46 (0)8 732 72 76  
<http://www.solveco.se>

## Contact person

Habib Hourani

## E-mail

[info@solveco.se](mailto:info@solveco.se)

## SDS date

2019-12-13

## SDS Version

2.0

## 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

## SECTION 2: Hazards identification

## ▼ 2.1. Classification of the substance or mixture

Flam. Liq. 2; H225, Highly flammable liquid and vapour.

Eye Irrit. 2; H319, Causes serious eye irritation.

## 2.2. Label elements

## Hazard pictogram(s)



## Signal word

Danger

## Hazard statement(s)

Highly flammable liquid and vapour.  
Causes serious eye irritation.

## Safety statement(s)

General

#### Prevention

P280, Wear eye protection.

P210, Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### Response

P337+P313, If eye irritation persists: Get medical advice/attention.

P370+P378, In case of fire: Use carbonic acid/water mist/carbon dioxide/alcohol-resistant foam to extinguish.

#### Storage

P403+P235, Store in a well-ventilated place. Keep cool.

#### Disposal

P501, Dispose of contents/container to an approved waste disposal plant.

### 2.3. Other hazards

#### Additional labelling

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

#### ▼ 3.2 Mixtures

Product/Ingredient name	Identifiers	% w/w	Classification	Note
Ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 REACH No.: Index No.: 603-002-00-5	90%	Flam. Liq. 2, H225 Eye Irrit. 2, H319	
Isopropanol	CAS No.: 67-63-0 EC No.: 200-661-7 REACH No.: Index No.: 603-117-00-0	10%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

#### Other information

No special

## SECTION 4: First aid measures

### ▼ 4.1. Description of first aid measures

#### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

Bring the person into fresh air and stay with him/her.

#### Skin contact

Immediately remove contaminated clothing and shoes. Ensure that skin, which has been exposed to the material, is washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

#### ▼ Eye contact

Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30°C) for at least 5

minutes and continue until irritation stops. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

#### Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

#### Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

#### 4.2. Most important symptoms and effects, both acute and delayed

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

If eye irritation persists: Get medical advice/attention.

#### Information to medics

Bring this safety data sheet.

### SECTION 5: Firefighting measures

#### ▼ 5.1. Extinguishing media

Extinguish fire with carbonic acid, powder or foam. Do not use water, as this will spread the fire.

#### ▼ 5.2. Special hazards arising from the substance or mixture

Fire will result in dense black smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides.

#### ▼ 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Fire fighters should wear appropriate personal protective equipment.

### SECTION 6: Accidental release measures

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

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

#### ▼ 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

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

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.

To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section on "Disposal considerations" in regard of handling of waste.

See section on 'Exposure controls/personal protection' for protective measures.

## SECTION 7: Handling and storage

### ▼7.1. Precautions for safe handling

Protect electrical equipment in accordance with current standards. To divert static electricity during transmission, containers must be grounded and connected by wire with the receiving containers. Do not use spark-forming tools.

Avoid static electricity.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/lighting/ventilating]equipment.

Use non-sparking tools.

Smoking, drinking and consumption of food is not allowed in the work area.

See section on 'Exposure controls/personal protection' for information on personal protection.

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

Always store in containers of the same material as the original container.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Take action to prevent static discharges.

#### Storage temperature

Dry, cool and well ventilated

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

## SECTION 8: Exposure controls/personal protection

### ▼8.1. Control parameters

—  
Ethanol

Long term exposure limit (8 hours): 1000 ppm

Long term exposure limit (8 hours): 1920 mg/m<sup>3</sup>

—  
Isopropanol

Long term exposure limit (8 hours): 400 ppm

Long term exposure limit (8 hours): 999 mg/m<sup>3</sup>

Short term exposure limit (15 minutes): 500 ppm

Short term exposure limit (15 minutes): 1250 mg/m<sup>3</sup>

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.

### 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

#### General recommendations

Smoking, eating and drinking are not allowed in the work premises

#### Exposure scenarios

In the event exposure scenarios are appended to the safety data sheet, the operational conditions and risk management measures in these shall be complied with.

#### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

#### Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above).

Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

#### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed

According to EC-Regulation 2015/830

thoroughly. Always wash hands, forearms and face.

**Measures to avoid environmental exposure**


No specific requirements

**Individual protection measures, such as personal protective equipment**


**Generally**

Use only CE marked protective equipment.



**Respiratory Equipment**

Work situation	Recommended Filter type	Class	Colour	Standards	
If ventilation at the work place is insufficient, use a half- or full mask with an appropriate filter or an air-supplied breathing apparatus.	A	-	Brown	EN14387	


**Skin protection**

Work situation	Recommended	Type/Category	Standards	
	Dedicated work clothing should be worn.	-	-	

**▼ Hand protection**

Work situation	Material	Glove Thickness (mm)	Breakthrough time (min.)	EN Standard(s)	
	Nitrile	-	-	EN374-2	
	Butyl	-	-	EN374-2, EN374-3, EN388, EN421	

**Eye protection**

Work situation	Recommended	Standards	
	Use face protection or safety glasses with side shields.	EN166	

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Form

Liquid

Colour

Colourless

Odour

Characteristic

Odour threshold (ppm)

~350

pH

No data available

Density (g/cm<sup>3</sup>)

0.79

Viscosity

No data available

Phase changes

Melting point (°C)

-114

Boiling point (°C)

78.00 °C

Vapour pressure

5.90 kPa (20.00 °C)

Vapour density

1.59

Decomposition temperature (°C)

No data available

Evaporation rate (n-butylacetate = 100)

No data available

Data on fire and explosion hazards

Flash point (°C)

12.00 °C

Ignition (°C)

No data available

Auto flammability (°C)

425 °C

Explosion limits (% v/v)

3.30 - 19.00 v/v%

Explosive properties

No data available

Oxidizing properties

No data available

Solubility

Solubility in water

Soluble

n-octanol/water coefficient

-0.32

Solubility in fat (g/L)

No data available

9.2. Other information

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

The product is stable under the conditions, noted in the section "Handling and storage".

### 10.3. Possibility of hazardous reactions

No special

### 10.4. Conditions to avoid

Avoid static electricity.

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

**SECTION 11: Toxicological information**
**11.1. Information on toxicological effects**

## ▼ Acute toxicity

Product/Ingredient name	Species	Test	Route of exposure	Result
Ethanol	Rat	LD50	Oral	6200.00 mg/kg
Ethanol	Rat	LC50 (4 hours)	Inhalation	124.70 mg/l
Ethanol	Rabbit	LD50	Dermal	>20000.00 mg/kg
Isopropanol	Rat	LD50	Oral	4396.00 mg/kg
Isopropanol	Rat	LC50 (4 hours)	Inhalation	46.5-72.0 mg/l
Isopropanol	Rabbit	LD50	Dermal	12800.00 mg/kg

## Skin corrosion/irritation

No data available

## ▼ Serious eye damage/irritation

Causes serious eye irritation.

## ▼ Respiratory or skin sensitisation

No data available



## Germ cell mutagenicity

No data available

## Carcinogenicity

No data available

## Reproductive toxicity

No data available

## STOT-single exposure

No data available

## STOT-repeated exposure

No data available

## Aspiration hazard

No data available

## Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

**SECTION 12: Ecological information**

## ▼ 12.1. Toxicity

Product/Ingredient name	Species	Test	Duration	Result
Ethanol	Fish (Pimephales)	LC50	96 hours	13480.00 mg/l

According to EC-Regulation 2015/830

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Ethanol	Algae	IC50	72 hours	>10.9 mg/l
Ethanol	Daphnia (Daphnia magna)	EC50	48 hours	5400.00 mg/l
Ethanol	Algae (Scenedesmus subspicatus)	IC50	7 days	5000.00 mg/l
Isopropanol	Fish	LC50	96 hours	4200.00 mg/l
Isopropanol	Algae (Scenedesmus subspicatus)	IC50	96 hours	>1000.00 mg/l
Isopropanol	Daphnia	EC50	48 hours	13299.00 mg/l

### 12.2. Persistence and degradability

Product/Ingredient name	Biodegradability	Test	Result
Ethanol	Yes	BOD5/COD	0.4 - 0.8
Isopropanol	Yes	OECD 301 C (Modified MITI Test)	84 %

### 12.3. Bioaccumulative potential

Product/Ingredient name	Potential bioaccumulation	LogPow	BCF
Ethanol	No		< 10
Isopropanol	No		

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

### 12.6. Other adverse effects

No special

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

#### EWC code

Not applicable

#### Specific labelling

Not applicable

#### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

### 14.1 - 14.4

This product is within scope of the regulations of transport of dangerous goods.

#### ADR/RID



UN number	Proper Shipping Name	Class	Packing group	Transport category (Tunnel restriction code)
1170	ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	3	II	2 (D/E)

#### ▼IMDG

##### Marine pollutant

No

##### 14.5. Environmental hazards

Not applicable

##### 14.6. Special precautions for user

Not applicable

##### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

### SECTION 15: Regulatory information

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

##### Restrictions for application

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

##### Demands for specific education

No special

##### SEVESO - Categories / dangerous substances:



P5c

##### Additional information

Not applicable

##### Sources

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).

Regulation (EC) 1907/2006 (REACH).

Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

The Control of Major Accident Hazards (COMAH) Regulations 2015.

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

#### Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.

H319, Causes serious eye irritation.

H336, May cause drowsiness or dizziness.

#### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
CSA = Chemical Safety Assessment  
CSR = Chemical Safety Report  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EINECS = European Inventory of Existing Commercial chemical Substances  
ES = Exposure Scenario  
EUH statement = CLP-specific Hazard statement  
EWC = European Waste Catalogue  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IARC = International Agency for Research on Cancer (IARC)  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SVHC = Substances of Very High Concern  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TWA = Time weighted average  
UN = United Nations  
UVCB = Complex hydrocarbon substance  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative

#### Additional information

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:

The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)

The classification of the mixture in regard of physical hazards has been based on experimental data.

#### The safety data sheet is validated by

SHCW/CHYMEIA

#### ▼ Other

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.