

# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

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

### 1.1 Product identifier

Trade name/designation:	Ethanol euro denatured 96 % TechniSolv®
Product No.:	84860
CAS No.:	64-17-5
INDEX No.:	not applicable
REACH No.:	not applicable
Other means of identification:	no data available

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

Relevant identified uses: General chemical reagent

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

Germany

<b>Schaller Automation Industrielle Automationstechnik GmbH &amp; Co. KG</b>	
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## SAFETY FOR YOU AND YOUR ENGINE

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Persönlich haftende Gesellschafterin:  
Schaller Automation Beteiligungs- und Verwaltungsgesellschaft mbH  
Sitz: Blieskastel  
Amtsgericht Saarbrücken HRB 2639  
Geschäftsführer: Dipl.-Kfm. Stephan Schaller jun.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### 2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements
Flammable liquid, category 2	H225
Eye irritation, category 2	H319

### 2.2 Label elements

#### 2.2.1 Labelling according to Regulation (EC) No. 1272/2008 [CLP]

##### Hazard pictograms



Signal word: Danger

Hazard statements	
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.

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.

##### Other hazards

None

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## SECTION 3: Composition / information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

Hazardous ingredients Classification according to Regulation (EC) No. 1272/2008 [CLP]

Substance name	Concentration	Product identifier	Hazard classes and hazard categories
Ethanol absolute	> 90%	CAS No.: 64-17-5 EC No.: 200-578-6 REACH No.: 01-2119457610-43-XXXX	Flam. Liq. 2 - H225 Eye Irrit. 2 - H319
2-Propanol	1 - 5%	CAS No.: 67-63-0 EC No.: 200-661-7 REACH No.: 01-2119457558-25-XXXX	Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336
Methyl ethyl ketone	1 - 5%	CAS No.: 78-93-3 EC No.: 201-159-0 REACH No.: 01-2119457290-43-XXXX	Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336

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## SECTION 4: First aid measures

### 4.1 General information

IF exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician. If unconscious 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.

#### After inhalation

Call a POISON CENTRE/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.

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

no data available

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

no data available

### 4.4 Self-protection of the first aider

First aider: Pay attention to self-protection!

### 4.5 Information to physician

no data available

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## SECTION 5: Firefighting 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 Special hazards arising from the substance or mixture

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

### 5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.  
Special protective equipment 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 jet 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

In case of major fire and large quantities: Remove persons to safety.

### 6.2 Environmental precautions

Discharge into the environment must be avoided.

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

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

### 6.4 Additional information

Clear spills immediately

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## 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.

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

Recommended storage temperature: 15-25°C

Storage class: 3

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

### 7.3 Specific end use(s)

no data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value	Remark
Ethanol absolute	GESTIS	UK	LTV	1920 mg/m <sup>3</sup> - 1000 ppm	
2-Propanol	GESTIS	UK	LTV	999 mg/m <sup>3</sup> - 400 ppm	
2-Propanol	GESTIS	UK	STV	1250 mg/m <sup>3</sup> - 500 ppm	15 minutes average value
Methyl ethyl ketone	2000/39/EC	EU	LTV	600 mg/m <sup>3</sup> - 200 ppm	
Methyl ethyl ketone	2000/39/EC	EU	STV	900 mg/m <sup>3</sup> - 300 ppm	
Methyl ethyl ketone	Gestis	EU	LTV	600 mg/m <sup>3</sup> - 200 ppm	
Methyl ethyl ketone	Gestis	EU	STV	900 mg/m <sup>3</sup> - 300 ppm	
Methyl ethyl ketone	Gestis	UK	LTV	600 mg/m <sup>3</sup> - 200 ppm	
Methyl ethyl ketone	Gestis	UK	STV	899 mg/m <sup>3</sup> - 300 ppm	

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

no data available

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### 8.2.2 Personal protection equipment

no data available

*Eye/face protection*

no data available

Recommendation: no data available

*Skin protection*

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms: DIN EN 374 In the case of wanting to use the gloves again, clean them before taking off and air them well.

By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	-
Breakthrough time (maximum wearing time):	240-480 min
Recommended glove articles:	VWR 112-3717 / 112-1381

By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,425 mm
Breakthrough time (maximum wearing time):	> 480 min
Recommended glove articles:	VWR 112-0971

*Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation

Suitable respiratory protection apparatus:	Full-/half-/quarter-face masks (DIN EN 136/140)
Recommendation:	VWR 111-0206
Suitable material:	ABEK2P3
Recommendation:	VWR 111-0059

*Additional information*

no data available

### 8.2.3 Environmental exposure controls

no data available

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Colour:	colourless
(b) Odour:	no data available
(c) Odour threshold:	no data available

### Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	no data available
(f) Initial boiling point and boiling range:	78 °C (1013 hPa)
(g) Flash point:	13.7 °C (closed cup)
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	Highly flammable liquid and vapour
(j) Flammability or explosive limits	
Lower explosion limit:	3.3 % (v/v)
Upper explosion limit:	19 % (v/v)
(k) Vapour pressure:	5.73 kPa (20 °C)
(l) Vapour density:	1.59
(m) Relative density:	0.805 g/cm <sup>3</sup> (20 °C)
(n) Solubility(ies)	
Water solubility (g/L):	soluble (20 °C)
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	-0.35 (20 °C)
(p) Auto-ignition temperature:	370 °C
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	1.2 Pa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

### 9.2 Other information

Bulk density:	not applicable
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry constant:	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

no data available

### 10.7 Additional information

no data available

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### *Acute oral toxicity:*

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

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

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

Methyl ethyl ketone - LD50: < 2600 mg/kg - Rat - (IUCLID)

##### *Acute dermal toxicity:*

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

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

Methyl ethyl ketone - LD50: < 8000 mg/kg - Rabbit - (Merck KGaA)

##### *Acute inhalation toxicity:*

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

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2-Propanol - LC50: 72600 mg/m<sup>3</sup> - Rat - (Japan GHS Basis for Classification Data)  
Methyl ethyl ketone - LC50: 11700 ppm - Rat - (Japan GHS Basis for Classification Data)

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 sensitisation  
In case of skin contact: not sensitising  
After inhalation: not sensitising

STOT-single exposure  
not applicable

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

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## SECTION 12: Ecological information

### 12.1 Ecotoxicity

**Fish toxicity:**

Ethanol absolute - LC50: 11000 mg/l (96 h) - Bengtsson, B.E., L. Renberg, and M. Tarkpea 1984. Molecular Structure and Aquatic Toxicity - an Example with C1-C13 Aliphatic Alcohols. Chemosphere 13(5/6):613-622

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

**Daphnia toxicity:**

Ethanol absolute - LC50: 9280 mg/l (48 h) - Takahashi, I.T., U.M. Cowgill, and P.G. Murphy 1987. Comparison of Ethanol Toxicity to *Daphnia magna* and *Ceriodaphnia dubia* Tested at Two Different Temperatures: Static Acute Toxicity Test Results. Bull. Environ. Contam. Toxicol. 39(2):229-236

Ethanol absolute - EC50: 9950 mg/l (48 h) - Barera, Y., and W.J. Adams 1983. Resolving Some Practical Questions About *Daphnia* Acute Toxicity Tests. In: W.E. Bishop (Ed.), Aquatic Toxicology and Hazard Assessment, 6th Symposium, ASTM STP 802, Philadelphia, PA :509-518

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

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: -0.35 (20 °C)

### 12.4 Mobility in soil:

no data available

### 12.5 Results of PBT/vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Appropriate disposal / Product

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

Waste code product: no data available

#### Appropriate disposal / Package

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

#### Additional information

no data available

## SECTION 14: Transport information

### Land transport (ADR/RID)

14.1	UN-No.:	1170
14.2	Proper Shipping Name:	ETHANOL
14.3	Class(es):	3
	Classification code:	F1
	Hazard label(s):	3
14.4	Packing group:	II
14.5	Environmental hazards:	No
14.6	Special precautions for user:	
	Hazard identification number (Kemler No.):	33
	tunnel restriction code:	D/E
		(Passage forbidden through tunnels of category D when carried in bulk or in tanks. Passage forbidden through tunnels of category E.)

### Sea transport (IMDG)

14.1	UN-No.:	1170
14.2	Proper Shipping Name:	ETHANOL
14.3	Class(es):	3
	Classification code:	
	Hazard label(s):	3
14.4	Packing group:	II
14.5	Environmental hazards:	No
	MARINE POLLUTANT:	No
14.6	Special precautions for user:	
	Segregation group:	-
	EmS-No.	F-E S-D
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not relevant

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

14.1	UN-No.:	1170
14.2	Proper Shipping Name:	ETHANOL
14.3	Class(es):	3
	Classification code:	
	Hazard label(s):	3
14.4	Packing group:	II
14.5	Special precautions for user:	

## SECTION 15: Regulatory information

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

#### EU legislation

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Text with EEA relevance)
- 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 (Text with EEA relevance)
- Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance)
- Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

#### National regulations

no data available

Water hazard class (WGK): no data available

### 15.2 Chemical Safety Assessment

no data available

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## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)  
CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures  
DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)  
Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)  
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  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
RID - Regulation concerning the International Carriage of Dangerous Goods by Rail  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
vPvB - very Persistent, very Bioaccumulative

### Additional information

Indication of changes: general update

*The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.*

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