

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 31.05.2017

Version number 5

Revision: 13.10.2016

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**· **1.1 Product identifier**· Trade name: **denatured Ethanol**· **Article number:**2294  
2270  
2280  
2295  
2299  
2293  
2297· **CAS Number:** 64-17-5· **EC number:** 200-578-6· **Index number:** 603-002-00-5· **Registration number** 01-2119457610-43-XXXX· **1.2 Relevant identified uses of the substance or mixture and uses advised against**· **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU24 Scientific research and development

· **Product category**

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC29 Pharmaceuticals

PC39 Cosmetics, personal care products

PC40 Extraction agents

· **Process category**

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC15 Use as laboratory reagent

· **Environmental release category**

ERC1 Manufacture of the substance

ERC2 Formulation into mixture

ERC3 Formulation into solid matrix

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)

· **Application of the substance / the mixture**

Laboratory chemicals

Reagent for analysis

· **1.3 Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:**

Th. Geyer GmbH &amp; Co. KG

Dornierstraße 4 - 6

D-71272 Renningen

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**Trade name: denatured Ethanol**

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Telefon: +49(0)7159-1637-0, Telefax:+49 (0)7159/18417

www.thgeyer.de

sicherheitsdatenblaetter@thgeyer.de

- **Further information obtainable from:** Product management department

- **1.4 Emergency telephone number:**

National Poisons Information Service

(Birmingham Centre)

City Hospital

Dudley Road

Birmingham B18 7QH

Tel.:Emergency: (00 44) 87 06 00 62 66

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

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



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **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.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

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· **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

##### CAS No. Description

Ethanol

##### Identification number(s)

· **EC number:** 200-578-6· **Index number:** 603-002-00-5

#### 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

##### Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6 Reg.nr.: 01-2119457610-43-XXXX	Ethanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319	50-100%
CAS: 78-93-3 EINECS: 201-159-0 Reg.nr.: 01-2119457290-43-XXXX	Methyl ethyl ketone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	0.1-≤2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General information:

First aider needs to protect himself.

Immediately remove any clothing soiled by the product.

##### After inhalation:

Take affected persons into fresh air and keep quiet.

Supply fresh air.

Seek medical treatment in case of complaints.

##### After skin contact:

Wash with water and soap.

If skin irritation continues, consult a doctor.

##### After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

##### After swallowing:

Rinse out mouth and then drink plenty of water.

Consult doctor if feeling unwell.

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

Headache

Dazed feeling

Vertigo

· **Information for doctor:** Please observe safety data sheet/label

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

If swallowed, induce vomiting (if patient is conscious).

Monitor circulation.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing agents:

Water spray, powder, carbon dioxide or foam. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

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· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide (CO)

Product is combustible.

Under certain fire conditions, traces of other toxic gases cannot be excluded.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

· **Additional information**

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Apply the general protection and hygiene measures for the handling with chemicals.

· **Information about fire - and explosion protection:**

Do not spray onto a naked flame or any incandescent material.

Highly volatile, flammable constituents are released during processing.

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· **Further information about storage conditions:** Keep container tightly sealed.

· **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

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### · 8.1 Control parameters

· <b>Ingredients with limit values that require monitoring at the workplace:</b>	
<b>CAS: 64-17-5 Ethanol</b>	
WEL	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
<b>CAS: 78-93-3 Methyl ethyl ketone</b>	
WEL	Short-term value: 899 mg/m <sup>3</sup> , 300 ppm Long-term value: 600 mg/m <sup>3</sup> , 200 ppm Sk, BMGV

### · Ingredients with biological limit values:

<b>CAS: 78-93-3 Methyl ethyl ketone</b>	
BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

· **Additional information:** The lists valid during the making were used as basis.

### · 8.2 Exposure controls

#### · Personal protective equipment:

#### · General protective and hygienic measures:

Avoid close or long term contact with the skin.

Do not eat or drink while working.

Be sure to clean skin thoroughly after work and before breaks.

Wash hands before breaks and at the end of work.

#### · Respiratory protection: Not required.

#### · Protection of hands:

Solvent resistant gloves



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### · Material of gloves

Nitrile rubber, NBR

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

#### · Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### · Eye protection:



Tightly sealed goggles

#### · Body protection:

Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

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### SECTION 9: Physical and chemical properties

· <b>9.1 Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
Form:	Fluid
Colour:	Colourless
· Odour:	Alcohol-like
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· <b>Change in condition</b>	
Melting point/freezing point:	-114.5 °C
Initial boiling point and boiling range:	>78 °C
· Flash point:	>21 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Explosion limits:</b>	
Lower:	3.5 Vol %
Upper:	15.0 Vol %
· Vapour pressure at 20 °C:	59 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water at 20 °C:	1 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
· <b>Solvent content:</b>	
Organic solvents:	91.0 %
VOC (EC)	91.00 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable with proper storage and handling.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
 Danger of explosion.  
 Forms explosive gas mixture with air.
- **10.4 Conditions to avoid** Heat, flames and sparks
- **10.5 Incompatible materials:** Avoid contact with other chemicals

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- **10.6 Hazardous decomposition products:** Flammable gases/vapours

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** biodegradable
- **12.3 Bioaccumulative potential**  
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

14 00 00	WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (EXCEPT 07 AND 08)
14 06 00	waste organic solvents, refrigerants and foam/aerosol propellants
14 06 03*	other solvents and solvent mixtures
HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· <b>14.1 UN-Number</b> · <b>ADR, IMDG, IATA</b>	UN1170
· <b>14.2 UN proper shipping name</b> · <b>ADR</b> · <b>IMDG</b> · <b>IATA</b>	1170 ETHANOL (ETHYL ALCOHOL) ETHANOL (ETHYL ALCOHOL) ETHANOL
· <b>14.3 Transport hazard class(es)</b> · <b>ADR</b>	
	
· <b>Class</b> · <b>Label</b>	3 Flammable liquids. 3
· <b>IMDG</b>	
	
· <b>Label</b>	3
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	II
· <b>14.5 Environmental hazards:</b>	Not applicable.
· <b>14.6 Special precautions for user</b> · <b>EMS Number:</b> · <b>Stowage Category</b>	Warning: Flammable liquids. F-E,S-D A
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	1 I Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1170 ETHANOL (ETHYL ALCOHOL), 3, II

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### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.
- **Department issuing SDS:** Product management
- **Contact:** Product management
- **Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

### Annex: Exposure scenario

- **Short title of the exposure scenario** Chemicals for Laboratory and industrial use
- **Sector of Use**  
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites  
SU9 Manufacture of fine chemicals  
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)  
SU24 Scientific research and development
- **Product category**  
PC19 Intermediate  
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents  
PC21 Laboratory chemicals  
PC29 Pharmaceuticals  
PC39 Cosmetics, personal care products  
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- **Process category**

- PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
- PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC4 Chemical production where opportunity for exposure arises
- PROC5 Mixing or blending in batch processes
- PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC15 Use as laboratory reagent

- **Environmental release category**

- ERC1 Manufacture of the substance
- ERC2 Formulation into mixture
- ERC3 Formulation into solid matrix
- ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)

- **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

- **Conditions of use**

- **Duration and frequency** 5 workdays/week.

- **Physical parameters**

- **Physical state** Fluid

- **Concentration of the substance in the mixture** Raw material.

- **Other operational conditions**

- **Other operational conditions affecting environmental exposure**

Observe section 6 of the Safety Data Sheet (Accidental release measures).

- **Other operational conditions affecting worker exposure**

Observe first aid measures (for treatment of exposure due to accidents).

Avoid contact with the skin and eyes.

- **Other operational conditions affecting consumer exposure** No special measures required.

- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.

- **Risk management measures**

- **Worker protection**

- **Organisational protective measures**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Persons, who tend to skin diseases or other hypersensitivity reactions of the skin, should not handle the product.

- **Technical protective measures**

Provide explosion-proof electrical equipment.

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

- **Personal protective measures**

The usual precautionary measures are to be adhered to when handling chemicals.

Do not inhale gases / fumes / aerosols.

- **Measures for consumer protection** Ensure adequate labelling.

- **Environmental protection measures**

- **Water**

Do not allow to reach ground water, water bodies or sewage system.

No special measures required.

- **Disposal measures** Ensure that waste is collected and contained.

- **Disposal procedures**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Waste type** Partially emptied and uncleaned packaging

- **Exposure estimation**

- **Consumer** Not relevant for this Exposure Scenario.

- **Guidance for downstream users** No further relevant information available.