

## Section 1. Identification

### 1.1. Product Identifier

Product form	: Liquid Mixture
Trade name	: Ethanol 95/E5
Common name(s)/synonyms	: Ethyl alcohol, denatured alcohol, ethyl hydroxide ,solvent reducer
Product type	: Solvent
Product code	: 1806
UN-No	: 1170

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

Recommended on Use : Solvent. Raw material for printing inks and printing ink additives.

### 1.3. Restrictions on use of substance or mixture.

Not available

### 1.4. Supplier's details

Company	: Rolfes Chemicals Pty Ltd
Address	: Cnr Brammer and Strachan Street
	: Germiston
	: South Africa
Telephone	: 011 873 0157
Email	: <a href="mailto:Info@rolfesza.com">Info@rolfesza.com</a>
Emergency telephone number	: +27 (0) 17 610 4444 / 0800 112 890

## Section 2. Hazards identification

### 2.1. Classification of a substance or a mixture

**Classification according to the United Nations GHS:**

Flammable liquids	: Hazard category 2,	H225
Acute toxicity	: Not classified	
Chronic toxicity	: Not classified	
Serious eye damage/eye irritation	: Hazard category 2A	H319
Skin irritation/corrosion	: Hazard category 2,	H315
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Hazard category 1A,	H350
Reproductive toxicity	: Hazard category 2,	H361
Specific target organ toxicity (STOT)		
– single exposure	: Hazard category 1,	H370
– Repeated exposure	: Hazard category 1,	H370
Hazardous to aquatic environment – Acute hazard		
Aspiration hazard	: Hazard category 1,	H304
Full text of H statements		

## 2.2. Label Elements

### Labelling according to SANS 10234: 2007 (GHS) label elements

Hazard pictograms (GHS-UN) : SANS 10234: 2007 (GHS) Label Elements



**Signal word (GHS-UN)** : Danger

**Hazard statements (GHS-UN)** :

- H225 – Highly flammable liquid and vapour
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H350 - May cause cancer (Ingestion)
- H361 - Suspected of damaging the unborn child (Ingestion)
- H370 - Causes damage to organs (central nervous system, optic nerve) (oral, Dermal)

**Precautionary Statements (GHS-UN):**

<b>General:</b>	P101+P102+P103: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
<b>Prevention:</b>	P233- Keep container tightly closed P240- Ground/bond container and receiving equipment P241- Use explosion-proof electrical, lighting, ventilating equipment P242- Use only non-sparking tools P243- Take precautionary measures against static discharge P260- Do not breathe mist, spray, vapors P264- Wash exposed skin thoroughly after handling P270- Do not eat, drink or smoke when using this product P280- Wear eye protection, face protection, protective clothing, protective gloves.
<b>Response:</b>	P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower 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+P313 - IF exposed or concerned: Get medical advice/attention P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P370+P378 - In case of fire: Use carbon dioxide (CO <sub>2</sub> ), powder, alcohol-resistant foam to Extinguish.
<b>Storage &amp; Disposal :</b>	P403+P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up P501 - Dispose of contents/container to comply with local, state and federal regulations.  See Section 11 for further health effects/toxicological data.

### 2.3. Other hazards which do not result in classification.

No additional data available

### 2.4. Unknown acute toxicity (GHS)

No data available.

## Section 3: Composition /Information on Ingredients

### 3.1. Substance

Not applicable

**3.2. Mixture**

Ingredient name	Product identifier	Contents (% W/W)	Classification according to the United Nations GHS (Hazard statements).
<b>Ethanol</b>	CAS No.: 64-17-5 Index No.: 603-002-00-5 EC No.: 200-578-6	>= 95.00	Flam. Liq. 2 H225; Skin Irrit. 2, H315; Eye Irrit. 2A, H319 Carc. 1A, H350; Repr. 2 H361; STOT single exposure, 1 H370.
<b>Ethyl acetate</b>	CAS No.: 141-78-6 Index No.: 607-022-00-5 EC No.: 205-500-4	<= 5.00	H225; H319; H336

No known additional substances that can be classified as hazardous according to GHS.

Substance identification codes: See section 11

See Section 8 for Exposure Limits (if applicable).

**Section 4. First aid measures**

**4.1. Description of necessary first aid measures.**

- First-aid measures general** : No information available
  
- First-aid measures after inhalation** : Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.
  
- First-aid measures after skin Contact** : Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
  
- First-aid measures after eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.
  
- First-aid measures after ingestion** : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.
  
- Note to doctors or physicians** : No information available.

**4.2. Most important symptoms/effects, acute and delayed**

Refer to section 11.

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

Treat symptomatically.

**Section 5. Fire-fighting measures****5.1. Flammability**

Highly flammable liquids, hazard category 2

**5.2. Extinguishing Media**

Suitable media : Water spray, Foam, CO2, Dry powder.

Unsuitable media : Water spray jet

**5.3. Special hazards arising from the substance or mixture**

Flash back possible over considerable distance. Do not allow run-off from fire-fighting to enter drains or water courses.

**5.4. Hazardous Products of Combustion**

No data available

**5.5. Special personal protective equipment (PPE) for fire fighters**

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**5.6. Special Fire Fighting Procedures**

Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.

**5.7. Additional information.**

No additional information available.

**Section 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** : Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours or spray mist.

**Procedure if material is released or spilled** : Report spills/releases as required to appropriate authorities.

**Environmental precautions** : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** : Soak up with inert absorbent material and dispose of as hazardous waste.

**Reference to other sections** : Refer to section 8 and 13

## Section 7. Handling and storage

### 7.1. Precautions for safe handling

Safe handling advise : Do not breathe vapours or spray mist. Wear personal protective equipment.

Advice on protection: against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition. Use explosion-proof equipment.

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

Safe storage conditions: Keep containers tightly closed in a cool, well-ventilated place.

Packaging and Transport : No information available.

Incompatibilities : Not known.

## Section 8. Exposure controls/personal protection

### 8.1. Control parameters: National Occupational Exposure Limits

Components with workplace control parameters

NATIONAL OCCUPATIONAL EXPOSURE LIMITS

Components	Type	Control parameters	Update	Basis

ETHYL ALCOHOL	TWA	1,900 mg/m <sup>3</sup>	1995	South Africa RELs
ETHANOL	TWA	1,000 ppm	1995	South Africa RELs
ETHYL ACETATE	TWA	1,400 mg/m <sup>3</sup>	1995	South Africa RELs
	TWA	400 ppm	1995	South Africa RELs

### 8.2. Exposure controls: Appropriate engineering controls

**Engineering controls** : Provide sufficient air exchange and/or exhaust in work rooms.

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

**Respiratory protection** : In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand protection** ; Gloves suitable for permanent contact:  
Material: butyl-rubber  
Break through time: 4 h  
Material thickness: 0.5 mm

**Eye protection** : Safety glasses with side-shields

**Skin and body protection** : Safety shoes or rubber boots. Protective suit

**Hygiene measures** : Wash hands before breaks and immediately after handling the product.

### 8.3. Personal protective equipment symbol (s)



## Section 9. Physical and chemical properties

Information on basic physical and chemical properties.

Form	Liquid
State of matter	Liquid; at 20 °C; 1,013 hPa
Colour	Colourless
Odour	Alcohol-like
Odour Threshold	No data available
pH	Neutral
Melting point/range	-83.6 °C
Boiling point/boiling range	77 °C
Flash point	13 °C; closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Auto-ignition temperature	363 °C
Lower explosion limit	3.3 %(V)
Upper explosion limit	19 %(V)
Relative vapour density	3.04
Density	0.795 g/cm <sup>3</sup> ; 20 °C
Water solubility	Completely soluble
Viscosity, dynamic	1.41 mPa.s
Viscosity, kinematic	1.342 mm <sup>2</sup> /s

## Section 10. Stability and reactivity

### 10.1. Reactivity: Conditions/materials to avoid

Reactivity: Not reactive under recommended storage conditions.

**Conditions to avoid** : Heat, flames and sparks. Extremes of temperature and direct sunlight.

**Materials to avoid** : Oxidizing agents.  
Acids and bases

**Possibility of Hazardous Reactions** : Heating can release hazardous gases.

**Incompatible materials** : Not known

**Hazardous decomposition products** : Carbon oxides

**Hazardous polymerization** : Not known.

Note: 10.1 assumes normal ambient and anticipated storage and handling conditions in respect of temperature and pressure.

## 10.2. Stability

Stable under normal conditions.

## Section 11. Toxicological information

### 11.1. Information on toxicological effects..

#### Acute toxicity

Acute oral toxicity : No data available

Acute inhalation toxicity : LC50 Mouse: 4 h; vapour; > 20 mg/l; (literature value)

Acute dermal toxicity : No data available

#### Skin irritation

: Ethanol:

Rabbit: Not irritating; OECD Test Guideline 404 (literature value)

#### Skin irritation

: Ethyl acetate:

Rabbit: Not irritating; (literature value)

#### Eye irritation

: Ethyl acetate:

Rabbit: Slightly irritating (literature value)

#### Sensitisation

: Ethanol:

Maximisation Test; Guinea pig: Not sensitizing; OECD Test Guideline 406; (literature value)

#### Sensitisation

: Ethyl acetate:

Maximisation Test; Guinea pig: Not sensitizing; OECD Test Guideline 406;

#### Mutagenicity

: Ethanol:

Ames test: Salmonella typhimurium; Not mutagenic; OECD Test Guideline 471; (literature value)

Ethyl acetate:

Ames test: Salmonella typhimurium; Not mutagenic; (literature value)

## Section 12. Ecological information

### 12.1. Ecotoxicity

Toxicity to fish	Ethanol: static test; <i>Leuciscus idus</i> ; 48 h; LC50; > 100 mg/l; OECD Test Guideline 203; (literature value)
Toxicity to fish	Ethyl acetate: semi-static test; <i>Salmo gairdneri</i> ; 96 h; > 100 mg/l; OECD Test Guideline 203; (literature value)
Toxicity to daphnia and other aquatic invertebrates	Ethanol: static test; <i>Daphnia magna</i> (Water flea); 24 h; EC50; > 100 mg/l(literature value)
Toxicity to daphnia and other aquatic invertebrates	Ethyl acetate: static test; <i>Daphnia magna</i> (Water flea); 48 h; EC50; > 100 mg/l(literature value)
Toxicity to algae	Ethanol: static test; <i>Chlorella pyrenoidosa</i> EC50; > 100 mg/l; OECD Test Guideline 201; (literature value)
Toxicity to algae	Ethyl acetate: static test; <i>Desmodesmus subspicatus</i> (green algae) 72 h; EC50; > 100 mg/l; (literature value)
Toxicity to bacteria	Ethanol: <i>Pseudomonas putida</i> ; 16 h; 6,500 mg/l; Toxicity to bacteria

### 12.2. Degradability

Biodegradability	Ethanol: aerobic; > 70 %; 5 d; Readily biodegradable.; OECD Guideline 301 D; (literature value)
Biodegradability	Ethyl acetate: aerobic; > 70 %; 28 d; Readily biodegradable.; OECD Guideline 301 D; (literature value)

**12.3. Persistent Bio-accumulative potential**

Results of PBT and vPvB assessment	This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).
Chemical Oxygen Demand (COD)	Ethanol: ca.1,700 mg/g; Directive 84/449/EEC, C.9; GLP: no;

**12.4. Mobility in soil and water**

No specific data available.

**12.5. Further information on ecology (other adverse effects)**

No additional information.

**Section 13: Disposal considerations**

**13.1. Disposal methods**

<b>Product waste</b>	: Disposal should be in accordance with local, regional and national legislations.
<b>Contaminated packaging</b>	: Dispose of spent product packaging responsibly and lawfully with due consideration for health, safety and the environment.

**13.2. Other regulations (additional information)**

No additional data

Flash Point : 13 °C , closed cup

**Section 14. Transport information**

**14.1. UN number, transport hazard class (es), packing group, and shipping name.**

DG Pictogram:



**ADR**

UN number: 1170  
Class: 3  
Packaging group: II; F1;  
Proper shipping name: ETHYL ALCOHOL SOLUTION  
RID  
UN number: 1170  
Class: 3  
Packaging group: II; F1  
Proper shipping name: ETHYL ALCOHOL SOLUTION  
ADNR  
UN number: 1170

Class: 3  
Packaging group: II; F1  
Proper shipping name: ETHYL ALCOHOL SOLUTION  
IMDG  
UN number: 1170  
Class: 3  
EmS: F-E, S-D  
Packaging group: II  
Proper shipping name: ETHYL ALCOHOL SOLUTION  
Marine pollutant: Not a Marine Pollutant  
ICAO/IATA  
UN number : 1170  
Class: 3  
Packaging group: II  
Proper shipping name: ETHYL ALCOHOL SOLUTION

**14.2. Transport according to IMO instructions**

No data available

**14.2. Environmental hazards**

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

**14.3. Special precautions for user**

Refer to section 14.1

**Section 15: Regulatory Information**

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

USA TSCA Inventory	All chemical constituents are listed in: USA TSCA Inventory (See chapter 3)
Canadian Domestic Substances List (DSL)	All chemical constituents are listed in: Canadian Domestic Substances List (DSL) (See chapter 3)
Australian Inv. of Chem. Substances (AICS)	All chemical constituents are listed in: Australian Inv. of Chem. Substances (AICS) (See chapter 3)
New Zealand Inventory of Chemicals (NZIoC)	All chemical constituents are listed in: New Zealand Inventory of Chemicals (NZIoC) (See chapter 3)
Jap. Inv. of Exist. & New Chemicals (ENCS)	All chemical constituents are listed in: Jap. Inv. of Exist. & New Chemicals (ENCS) (See chapter 3)
Japan. Industrial Safety & Health Law (ISHL)	All chemical constituents are listed in: Japan. Industrial Safety & Health Law (ISHL) (See chapter 3)
Korea. Existing Chemicals Inventory (KECI)	All chemical constituents are listed in: Korea. Existing Chemicals Inventory (KECI) (See chapter 3)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	All chemical constituents are listed in: Philippines Inventory of Chemicals and Chemical Substances (PICCS) (See chapter 3)
China Inv. Existing Chemical Substances (IECSC)	All chemical constituents are listed in: China Inv. Existing Chemical Substances (IECSC) (See chapter 3)

Regulatory reference: SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

## Section 16. Other information

### Full text of H-Statements

- H225 Highly flammable liquid and vapour.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H315 Causes skin irritation
- H350 May cause cancer (Ingestion)
- H361 Suspected of damaging the unborn child (Ingestion)
- H370 Causes damage to organs (central nervous system, optic nerve) (oral, Dermal)

**Note:** No significant changes have been made to this Safety Data Sheet since the previous date.

### More abbreviations That May Have Been Used In This Document:

TLV - Threshold Limit Value	TWA - Time Weighted Average
LTEL - Long-term Exposure Limit	STEL - Short-term Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists	CAS - Chemical Abstract Service Number
IMO/IMDG - International Maritime Dangerous Goods Code	SDS – Safety Data Sheet
SANS – South African National Standards	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
STOT – Specific Target Organ Toxicity	OHS Act – Occupational Health and Safety Act
NFPA - National Fire Protection Association (USA)	ECHA - European Chemicals Agency

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### Disclaimer

All information and instructions provided in this Safety Data Sheet (SDS) in respect of the substance, is given solely in terms of the provision of the Occupational Health and Safety Act No 85 of 1993 and Regulations (the Act), is based on scientific and technical knowledge as at the date indicated on this SDS, and is presented in good faith to be correct. The information and instructions provided in the SDS apply only to the substance in its present form and not to any formulation or mix, in which event it is the sole responsibility of the user of the substance as formulated and/or mixed to investigate and establish any danger which may arise out of its use, wherever such user may be situated. It is the sole responsibility of the person in receipt of this SDS, wherever such recipient may be situated, to ensure that the information provided is communicated to and understood by any person who may come in contact with the substance in any place and in any manner whatsoever. If such recipient produces formulations or mixes using the substance, then it is such recipient's sole responsibility to comply with the provisions of the Act in respect of the provisions of the necessary SDS, or to comply with any other applicable legislation