



# SAFETY DATA SHEET

## 1. Identification of the substance/preparation and of the company

Product name :  
 Product code :  
 Use of the substance/preparation : Refer to technical data sheet for use thereof

## 2. Composition/information on ingredients

**Chemical characterization** : Aqueous mixture.

Ingredient name	CAS number	%	EC number	Classification
Ethanol	64-17-5	60 - 70		F; R11

See section 16 for the full text of the R-phrases declared above

Occupational exposure limits, if available, are listed in section 8.

## 3. Hazards identification

The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : F; R11  
**Physical/chemical hazards** : Flammable liquid and vapor.  
**Human health hazards** : Ingestion may cause narcosis, inebriation or central nervous system effects.  
**Environmental hazards** : No known significant effects or critical hazards.

See section 11 for more detailed information on health effects and symptoms.

## 4. First aid measures

**Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Ingestion** : Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact** : Get medical attention if irritation develops.

**Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

See section 11 for more detailed information on health effects and symptoms.

## 5. Fire-fighting measures

### Extinguishing media

- Suitable** : In case of fire, use water spray (fog), foam or dry chemical.  
**Not suitable** : Do not use water jet.

**Special exposure hazards** : No specific hazard.

**Hazardous thermal decomposition products** : These products are carbon oxides (CO, CO<sub>2</sub>).

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

**Personal precautions** : Use suitable protective equipment. Eliminate all ignition sources.

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

## 7. Handling and storage

**Handling** : Wash thoroughly after handling the packaging .

**Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

### Packaging materials

**Recommended** : Use original container.

## 8. Exposure controls/personal protection

### Ingredient name

Ethanol

### Occupational exposure limits

**ACGIH (United States, 1996).**

TWA: 1000 ppm

**ACGIH TLV (United States, 1/2004). Notes: 1996 Adoption Refers to Appendix A – Carcinogens.**

TWA: 1880 mg/m<sup>3</sup> 8 hour/hours. Form: All forms

TWA: 1000 ppm 8 hour/hours. Form: All forms

**Occupational exposure controls** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## 9. Physical and chemical properties

### General information

#### Appearance

**Physical state** : Liquid. (Hazy liquid.)

**Color** : Yellow.

**Odor** : Alcohol-like.

**Odor threshold** : The lowest known value is 180 ppm (Ethanol)

### Important health, safety and environmental information

**pH** : 8 to 9 [Basic.]

**Boiling point** : The lowest known value is 78.35°C (173°F) (Ethanol).

**Melting point** : May start to solidify at 0°C (32°F) based on data for: water.

**Flash point** : The lowest known value is Closed cup: 12.85°C (55.1°F). Open cup: 12°C (53.6°F). (Ethanol)

<b>Explosion limits</b>	: The greatest known range is Lower: 3.3% Upper: 19% (Ethanol)
<b>Vapor pressure</b>	: The highest known value is 5.3 kPa (40 mm Hg) (at 20°C) (Ethanol).
<b>Relative density</b>	: 0.9 g/cm <sup>3</sup>
<b>Solubility</b>	: Easily soluble in cold water, hot water, methanol, acetone. Partially soluble in diethyl ether.
<b>Vapor density</b>	: The highest known value is 1.6 (Air = 1) (Ethanol).
<b>Evaporation rate (butyl acetate = 1)</b>	: 0.36 (water) compared with (n-BUTYL ACETATE=1)
<b>Other information</b>	
<b>Auto-ignition temperature</b>	: The lowest known value is 398.85°C (749.9°F) (Ethanol).

## 10. Stability and reactivity

<b>Stability</b>	: The product is stable.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>Materials to avoid</b>	: Reactive or incompatible with the following materials: oxidizing materials.
<b>Hazardous decomposition products</b>	: These products are: carbon oxides (CO, CO <sub>2</sub> )

## 11. Toxicological information

### Potential acute health effects

<b>Inhalation</b>	: Inhalation of vapors may cause dizziness, an irregular heartbeat, narcosis, nausea or asphyxiation.
<b>Ingestion</b>	: Ingestion may cause narcosis, inebriation and central nervous system effects.
<b>Skin contact</b>	: No known significant effects or critical hazards.
<b>Eye contact</b>	: Mildly irritating to the eyes.

### Acute toxicity

Product/ingredient name	Test	Result	Route	Species
Ethanol	LD50	7060 mg/kg	Oral	Rat
	LD50	6300 mg/kg	Oral	Rabbit
	LD50	3450 mg/kg	Oral	Mouse
	LDLo	1400 mg/kg	Oral	human
	LDLo	5500 mg/kg	Oral	Dog
	LC50	20000 mg/m <sup>3</sup> (10 hour/hours)	Inhalation	Rat

### Potential chronic health effects

<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Inhalation</b>	: Inhalation of vapors may cause dizziness, an irregular heartbeat, narcosis, nausea or asphyxiation.
<b>Ingestion</b>	: Ingestion may cause narcosis, inebriation, and central nervous system effects.
<b>Skin</b>	: Repeated exposure may cause skin dryness or cracking.
<b>Target organs</b>	: Contains material which causes damage to the following organs: blood, the nervous system, the reproductive system, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea

## 12. Ecological information

### Ecotoxicity data

Ingredient name	Species	Period	Result
Ethanol	Daphnia magna (EC50)	48 hour/hours	2 mg/l
	Daphnia magna (EC50)	48 hour/hours	9.3 mg/l
	Daphnia magna (EC50)	48 hour/hours	>100 mg/l
	Pimephales promelas (LC50)	96 hour/hours	>100 mg/l
	Daphnia magna (LC50)	96 hour/hours	>100 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	13000 mg/l

### Other ecological information

Persistence/degradability			
Ingredient name	BOD <sub>5</sub>	COD	ThOD
Ethanol	>1 g O <sub>2</sub> /g	2 g O <sub>2</sub> /g	-
Aquatic half-life			
Ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ethanol	6 day/days	4 day/days	Readily

**Other adverse effects** : None identified.

### 13. Disposal considerations

**Methods of disposal** : Hazardous chemical waste.  
Incinerate unwanted products.  
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
ADR / SANS 10228 Class	UN1170	ETHANOL SOLUTION	3	III		<b>Hazard identification number</b> 30  <b>Limited quantity</b> LQ7  <b>CEFIC Tremcard</b> 30GF1-III
IMDG Class	UN1170	ETHANOL SOLUTION	3	III		<b>Emergency schedules (EmS)</b> F-E, S-D
IATA Class	UN1170	ETHANOL SOLUTION	3	III		<b>Quantity limitation - Passenger aircraft - Limited quantity</b> 10 L  <b>Quantity limitation - Passenger aircraft</b> 60 L  <b>Quantity limitation - Cargo aircraft</b> 220 L

### 15. Regulatory information

SANS 10265 / EU Regulations

**Hazard symbol/symbols** :



Highly flammable

**Risk phrases** : R11- Highly flammable.

**Safety phrases** : S16- Keep away from sources of ignition - No smoking.

**Product use** : Classification and labeling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and the intended use.  
- Industrial applications.

### 16. Other information

**Full text of R-phrases referred to in sections 2 and 3 - Europe** : R11- Highly flammable.

**Prepared by** : Not available.

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.