



# eni Antifreeze Bike S

## Safety Data Sheet

According to Regulation (EC) No. 453/2010 - 830/2015

**Revision date:** 31/05/2015

**Version:** 2.0

**Supersedes:** 31/05/2015

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

### 1.1. Product identifier

Product form : Mixture  
Trade name : eni Antifreeze Bike S  
EC index no : N/A  
EC no : N/A  
CAS No : N/A  
REACH registration No : N/A  
Product code : 1619-CLP  
Formula : 3001-2013  
Product group : Trade product

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

#### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Industrial use, Professional use, Consumer use  
Industrial/Professional use spec : Wide dispersive use  
Used in closed systems  
Use of the substance/mixture : Antifreeze  
Function or use category : Anti-freezing agents

#### 1.2.2. Uses advised against

No additional information available

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

ENI S.p.A.  
P.le E. Mattei 1 - 00144 ROMA Italy  
Tel (+39) 06 59821  
www.eni.com

Contact:  
Refining & Marketing and Chemicals  
Via Laurentina 449 00142 ROMA Italy  
Tel (+39) 06 59881 Fax (+39) 06 59885700

Competent person responsible for the Safety Data Sheet (Reg. EC nr. 1907/2006): SDSInfo@eni.com

### 1.4. Emergency telephone number

Emergency number : CNIT +39 0382 24444 (24h) (IT + EN)

Poison centre (UK):

National Poisons Information Service Edinburgh (24h)  
(+44) 844 892 0111  
0870 600 6266 (UK only)  
(Source: UN-WHO)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Acute Tox. 4 (Oral) H302  
STOT RE 2 H373

Full text of H-phrases: see section 16

#### Adverse physicochemical, human health and environmental effects

Harmful if swallowed. May cause damage to organs (kidneys) through prolonged or repeated exposure (Oral).

### 2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS08

CLP Signal word

: Warning

Hazardous ingredients and/or with relevant occupational exposure limits

: Contains: Ethandiol

Hazard statements (CLP)

: H302 - Harmful if swallowed  
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (Oral)

Precautionary statements (CLP)

: P102 - Keep out of reach of children  
P234 - Keep only in original container  
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P501 - Dispose of contents/container to according to national or local regulations

#### Other:

General advice

: (Not applicable - Classified as dangerous according to (EC) No 1272/2008)

### 2.3. Other hazards (not relevant for classification)

Physical/chemical

: If the product is handled or used at high temperature, contact with hot product or vapours may cause burns.,While not normally combustible, if water content is lost (as in a fire), this material may release flammable vapours if exposed to high temperature.

Health

: If the product is handled or used at high temperature, contact with hot product or vapours may cause burns.,Any material in case of accidents involving pressurized circuits and the like, may be accidentally injected under the skin, even without external damage. In such a case, the victim should be brought to an hospital as

soon as possible, to get specialized medical treatment.

Environment : None.

Contaminants : None.

(air contaminants or other substances)

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixture

Composition/information on ingredients : Mixture of water and ethylene glycol, with anticorrosion and antifoam additives.

Hazardous ingredients and/or with relevant occupational exposure limits : See table

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Ethandiol (Main component)	(CAS No) 107-21-1 (EC no) 203-473-3 (EC index no) 603-027-00-1 (REACH-no) 01-2119456816-28	35 - 60	Xn; R22
2-ethylhexanoic acid, sodium salt (Additive)	(CAS No) 19766-89-3 (EC no) 243-283-8 (EC index no) N/A (REACH-no) N/D	0,5 - 1,99	Repr. Cat.3; R63

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Ethandiol (Main component)	(CAS No) 107-21-1 (EC no) 203-473-3 (EC index no) 603-027-00-1 (REACH-no) 01-2119456816-28	35 - 60	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
2-ethylhexanoic acid, sodium salt (Additive)	(CAS No) 19766-89-3 (EC no) 243-283-8 (EC index no) N/A (REACH-no) N/D	0,5 - 1,99	Repr. 2, H361d

Full text of R-, H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : In case of spontaneous vomiting, transport the victim to a hospital, to verify the possibility that the product has been aspired into the lungs.

First-aid measures after inhalation : In case of disturbances owing to inhalation of vapours or mists, remove the victim from exposure; keep at rest; if necessary, seek medical attention.

First-aid measures after skin contact	: Take off contaminated clothing and shoes. Wash thoroughly with soap and water. If inflammation or irritation persists, seek medical advice. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor or bring to an hospital. Do not use salves or ointments, unless directed by doctor. Body hypothermia must be avoided. Do not put ice on the burn.
First-aid measures after eye contact	: Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation persists, seek medical advice. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor or bring to an hospital. Do not use salves or ointments, unless directed by doctor.
First-aid measures after ingestion	: Do not induce vomiting to avoid aspiration into the lungs. If the person is conscious, rinse mouth with water without swallowing. Keep at rest. Call for medical assistance or bring to an hospital. If the casualty is unconscious, place in the recovery position. Do not wait for symptoms to develop. In case of spontaneous vomiting, keep head low, to avoid the risk of aspiration into the lungs. Do not give anything by mouth to an unconscious person.

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

Symptoms / injuries (general indications)	: May cause damage to kidneys through prolonged or repeated exposure if swallowed.
Symptoms/injuries after inhalation	: This product has a low vapour pressure, and in normal conditions at ambient temperature the concentration in the air is negligible. A significant concentration may build up only if the product is used at high temperature, or in case of sprays and mists. In these cases overexposure to vapours may cause irritation to airways, nausea and dizziness.
Symptoms/injuries after skin contact	: Prolonged or repeated skin contact may cause a slight transient irritation. Contact with hot product may cause thermal burns.
Symptoms/injuries after eye contact	: Contact with eyes may cause a light transient irritation. Contact with hot product or vapours may cause burns.
Symptoms/injuries after ingestion	: Ingestion of significant quantities (see sect. 11) may cause kidney damages, coma and death. The effects may be delayed.
Symptoms/injuries upon intravenous administration	: No information available.
Chronic symptoms	: May cause damage to kidneys through prolonged or repeated exposure if swallowed.

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

The casualty should be sent immediately to hospital. Do not wait for symptoms to develop. Seek medical attention in all cases of serious burns.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Small-size fires: carbon dioxide, dry chemicals, alcohol-resistant foam, sand or earth. Large fires: alcohol-resistant foam or water fog (mist). These means should be used by trained personnel only. Other extinguishing gases (according to regulations).
Unsuitable extinguishing media	: Do not use water jets. They could cause splattering, and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

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

- Fire hazard : Product with a very low risk of fire. It can create flammable mixtures or burn only when the water content has evaporated.
- Explosion hazard : In case of losses from pressurized circuits, the sprays may form mists. Take into account that in this case the lower explosion limit for mists is about 45 g/m<sup>3</sup> of air.
- Combustion products : Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, NO<sub>x</sub> (harmful/toxic gases), Oxygenated compounds (aldehydes, etc.), NaO<sub>x</sub>

## 5.3. Advice for firefighters

- Firefighting instructions : Shut off source of product, if possible. If possible, move containers and drums away from danger area. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.
- Special protective equipment for firefighters : Personal protection equipment for firefighters (see also sect. 8). Self-contained breathing apparatus.
- Other information : In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

## SECTION 6: Accidental release measures

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

- General measures : Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid accidental sprays on hot surfaces or electrical contacts. Avoid direct contact with released material.

#### 6.1.1. For non-emergency personnel

- Protective equipment : See Section 8.
- Emergency procedures : Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

#### 6.1.2. For emergency responders

- Protective equipment : Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. If necessary heat resistant and insulated. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant, and are not suitable for emergency use. If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Work helmet. Antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: a half or full-face respirator with filter(s) for organic vapours (AX), or a Self-contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
- Emergency procedures : Notify local authorities according to relevant regulations.

### 6.2. Environmental precautions

Do not let the product accumulate in confined or underground spaces. Do not let the product flow into sewers or water courses, or in any way contaminate the environment.

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

- For containment : Soil. Contain spilled liquid with sand, earth or other suitable absorbents. Recover free liquid in suitable containers. Clean contaminated area. Dispose of according to local regulations. Water: This product is soluble in water, and usually no special measures are feasible. If possible, collect spilled product with mechanical means. Notify official Authorities when required. Dispose of in accordance with relevant local regulations. Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities.
- Other information : Local regulations may also prescribe or limit actions to be taken. Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary.

## 6.4. Reference to other sections

See Section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure that all relevant regulations regarding handling and storage facilities of flammable products are followed. Do not use compressed air for filling, discharging, or handling operations. Keep away from heat/sparks/open flames/hot surfaces. During transfer and mixing operations, ensure that all equipment is correctly grounded. Avoid the build-up of electric charges. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content and flammability.
- Handling temperature : 0 - 65 °C
- Hygiene measures : Avoid contact with skin. Do not breathe fume/ mist/ vapours. Do not ingest. Do not eat, drink or smoke when using this product.

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

- Storage conditions : Store in dry, well ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke. If the product is supplied in containers: Keep only in the original container or in a suitable container for this kind of product. Keep containers tightly closed and properly labelled.
- Incompatible products : Keep away from: strong acids and strong oxidants.
- Incompatible materials : Do not use zinc containers. Use only the original containers or others that have been approved for this product.
- Storage temperature : 0 - 55 °C
- Storage area : Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.
- Packaging materials : For containers, or container linings use materials specifically approved for use with this product. Recommended materials for containers, or container linings use mild steel, stainless steel. Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

**7.3. Specific end use(s)**

No information available.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

<b>Ethandiol (107-21-1)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup> Vapours
EU	IOELV STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> Vapours
Belgium	Limit value (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup> (Inhalable aerosol)
Belgium	Short time value (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> (Inhalable aerosol)
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	26 mg/m <sup>3</sup> (Inhalable aerosol) (15 min)
Germany	TRGS 900 Limitation of exposure peaks (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup> (Inhalable aerosol) (15 min)
Italy - Portugal - USA ACGIH	ACGIH TLV®-STEL Ceiling (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Italy	OEL TWA (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup> Skin
Italy	OEL TWA (ppm)	20 ppm
Italy	OEL STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> Skin
Italy	OEL STEL (ppm)	40 ppm
Spain	VLA-ED (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup> (Inhalable aerosol)
Spain	VLA-EC (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> (Inhalable aerosol)
Spain	Notes	skin
Switzerland	VLE (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup> (Inhalable aerosol)
Switzerland	VME (mg/m <sup>3</sup> )	26 mg/m <sup>3</sup> (Inhalable aerosol)
The Netherlands	MAC TGG 8h (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Inhalable aerosol)
Denmark	Grænseværdi (langvarig) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Inhalable aerosol)
Denmark	Grænseværdi (kortvarig) (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (Inhalable aerosol)
Poland	NDS (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (Inhalable aerosol)

<b>Ethandiol (107-21-1)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	106 mg/kg bodyweight/day
Long-term - local effects, inhalation	35 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - local effects, inhalation	7 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	53 mg/kg bodyweight/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	10 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	20,9 mg/kg dwt
<b>PNEC (Soil)</b>	

PNEC soil	1,53 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	199,5 mg/l

- Monitoring methods : Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts.,Refer to relevant legislation and in any case to the good practice of industrial hygiene.
- Additional information : Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

## 8.2. Exposure controls

- Appropriate engineering controls : Before commencing any operation in a confined area (e.g. tunnels), check the atmosphere for oxygen content and flammability.
- Personal protective equipment (for industrial or professional use) : Gloves. Protective clothing. Safety glasses. Safety shoes or boots. Face shield. Combined gas/dust mask with filter type A/P2.



- Hand protection : When there is a risk of contact with the skin, use waterproof gloves, resistant to chemical products. Gloves must be felt-lined. Materials that are presumably adequate: nitrile (NBR) or PVC with a protection index > 5 (permeation time > 240 mins). Thickness of glove material: > 0,4 mm. Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation. If necessary, refer to the EN 374 standard. Personal hygiene is a key element for an effective hand care. Gloves must be worn only with clean hands. After wearing gloves, hands must be carefully washed and dried.
- Eye protection : When there is a risk of contact with the eyes, use safety goggles or other means of protection (face shield). If necessary, refer to national standards or to the EN 166 standard.
- Skin and body protection : Long-sleeved overalls. If necessary, refer to the EN 340 and related standards, for definition of characteristics and performance according to the risk rating of the area. Antistatic non-skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated.
- Respiratory protection : Independently from other possible actions (technical modifications, operating procedures, and other means to limit the exposure of workers), personal protection equipment can be used according to necessity. Open or well ventilated spaces: if the product is handled without adequate containment: use full or half-face masks with adequate filter for mists and organic vapours. (EN 136/140/145). Closed or confined areas (e.g. tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus), must be assessed according to the specific activity, as well as level and duration of predicted exposure. (EN 136/140/145).



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Thermal hazard protection	: If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated.
Environmental exposure controls	: Storage areas/installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Do not discharge the product into the environment. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Consumer exposure controls	: No special requirements necessary, if handled at room temperature.

### 8.3. Hygiene measures

General protective and hygienic measures	: Avoid contact with skin and eyes, Do not breathe vapours or mists., Do not clean hands with dirty or oil-soaked rags., Do not keep dirty rags in the overall pockets., Do not drink, eat or smoke with dirty hands., Wash hands with water and mild soap, do not use solvents or other irritant products which have a defatting effect on the skin., Do not re-use clothes, if they are still contaminated.
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## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Liquid, bright & clear.
Molecular mass	: Not applicable for mixtures
Colour	: pink.
Odour	: Glycol.
Odour threshold	: There are no data available on the preparation/mixture itself.
pH	: 7,5 - 8,5
Relative evaporation rate (butylacetate=1)	: There are no data available on the preparation/mixture itself.
Melting point	: $\leq -40$ °C (ASTM D1177)
Freezing point	: No data available
Boiling point	: $\geq 100$ °C (ASTM D 1120)
Flash point	: $\geq 112$ °C This value cannot be determined in a reliable way. Heating the product generates a mixture of steam and other products, which is not easily ignited. The indicated value refers to ethylene glycol as pure substance
Self ignition temperature	: $\geq 300$ °C (DIN 51794)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: $< 0,1$ mPa
Relative vapour density at 20 °C	: No data available
Relative density	: No data available

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Density	: 1071 kg/m <sup>3</sup> (20 °C) (ASTM D 1122)
Solubility	: Water: Complete.
Log Pow	: Not applicable for mixtures
Log Kow	: No data available
Viscosity, kinematic	: 3 mm <sup>2</sup> /s (20 °C) (ASTM D 445)
Viscosity, dynamic	: No data available
Explosive properties	: None.
Oxidising properties	: None.
Explosive limits	: 3 - 53 vol % (Ethylene glycol)

## 9.2. Other information

VOC content : = 0 % (EU, CH)

*The above data are typical values and do not constitute a specification.*

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This mixture does not offer any further hazard for reactivity, except what is reported in the following paragraphs.

### 10.2. Chemical stability

Stable product, according to its intrinsic properties (in normal conditions of storage and handling).

### 10.3. Possibility of hazardous reactions

None (in normal conditions of storage and handling).

### 10.4. Conditions to avoid

Keep away from: strong acids and strong oxidants. Keep away from open flames, hot surfaces and sources of ignition. Avoid the build-up of electrostatic charge.

### 10.5. Incompatible materials

Strong oxidants and strong acids.

### 10.6. Hazardous decomposition products

None.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

The toxic (fatal) dose for pure ethylene glycol has been estimated 1.4 ml/kg wt (about 100 ml for an adult person).

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Product code: 1619-CLP

## Safety Data Sheet

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eni Antifreeze Bike S (N/A)	
LD50 dermal rabbit	≥ 2000 mg/kg bodyweight (Calculated data).
LC50 inhalation rat (mg/l)	≥ 5 mg/l/4h (Calculated data).
ATE (oral)	500,000 mg/kg bodyweight
ATE (dermal)	2000,000 mg/kg bodyweight
ATE (vapours)	5,000 mg/l/4h
ATE (dust,mist)	5,000 mg/l/4h

Ethandiol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight
LD50 dermal rabbit	≥ 3500 mg/kg bodyweight
LC50 inhalation rat (mg/l)	≥ 2,5 mg/l/4h
ATE (oral)	500,000 mg/kg bodyweight

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) (according to composition) pH: 7,5 - 8,5
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) (according to composition) pH: 7,5 - 8,5
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met) (according to composition) This product does not contain any significant amounts of substances classified as sensitizers (in any case < 0.1 % wt)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met) (according to composition) This product does not contain any significant amounts of substances classified as mutagenic by the EU (in any case < 0.1 % wt)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met) (according to composition) None of the components of this product are listed as carcinogen by NTP, IARC, OSHA, EU or others.
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met) (according to composition) This product contains a substance (2-ethylhexanoic acid, sodium salt) classified as Repr. 2, H361 (CLP) according to the criteria of EU
Specific target organ toxicity (single exposure)	: Not classified (Based on available data, the classification criteria are not met) (according to composition)
Specific target organ toxicity (repeated exposure)	: May cause damage to kidneys through prolonged or repeated exposure if swallowed. (according to composition)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met) (according to composition)

Potential Adverse human health effects and symptoms	: Harmful if swallowed. Prolonged or repeated skin contact may cause a slight transient irritation. Contact with eyes may cause temporary reddening and irritation. May cause damage to kidneys through prolonged or repeated exposure if swallowed.
Other information	: None.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: According to the components, and by comparison with other products of the same type and composition, it is expected that this product has a toxicity for aquatic organisms > 100 mg/l, and must not be regarded as dangerous to the environment. An uncontrolled release to the environment may nevertheless produce a contamination of different environmental compartments (soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.
Ecology - air	: This product has a low vapour pressure. A significant exposure may happen only if the product is used at high temperature, or in case of sprays and mists.
Ecology - water	: This product is soluble in water.

eni Antifreeze Bike S (N/A)	
LC50 fish 1	≥ 100 mg/l (Calculated data). This evaluation is based on the information provided by the suppliers.
EC50 Daphnia 1	≥ 100 mg/l (Calculated data). This evaluation is based on the information provided by the suppliers.
ErC50 (algae)	≥ 100 mg/l (Calculated data). This evaluation is based on the information provided by the suppliers.

Ethandiol (107-21-1)	
LC50 fish 1	15380 mg/l (LC10 - 96h)
EC50 Daphnia 1	8590 mg/l (EC10 - 48h)
ErC50 (algae)	≥ 100 mg/l (EC10)

### 12.2. Persistence and degradability

eni Antifreeze Bike S (N/A)	
Persistence and degradability	The most significant constituents of the product should be considered as "readily biodegradable".

Ethandiol (107-21-1)	
Persistence and degradability	Readily biodegradable.
Biochemical oxygen demand (BOD)	0,36 - 0,4 g O <sup>2</sup> /g substance
Chemical oxygen demand (COD)	1,21 g O <sup>2</sup> /g substance
ThOD	1,26 g O <sup>2</sup> /g substance

### 12.3. Bioaccumulative potential

eni Antifreeze Bike S (N/A)	
Log Pow	Not applicable for mixtures

Ethandiol (107-21-1)	
Log Pow	-1,36

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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### eni Antifreeze Bike S (N/A)

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

Results of PBT-vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB. The product should be considered as "Not persistent" in the environment, according to the REACH Annex XIII criteria (point 1.1)

### 12.6. Other adverse effects

Other adverse effects : None.

Other information : This product has no specific properties for inhibition of bacterial activity. In any case, wastewater containing this product should be treated in plants that are suited for the specific purpose.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Do not dispose of the product, either new or used, by discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector.

Sewage disposal recommendations : Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed. Dispose of in a safe manner in accordance with local/national regulations.

Waste disposal recommendations : European Waste Catalogue code(s) (Decision 2001/118/CE): 16 01 14\* (antifreeze fluids containing dangerous substances). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.

Additional information : Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been cleaned, and declared safe.

Ecology - waste materials : The product as it is does not contain halogenated substances.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

No dangerous good in sense of transport regulations

### 14.2. UN proper shipping name

Proper Shipping Name : Not applicable

### 14.3. Transport hazard class(es)

Subsidiary risk (IMDG) : --

Subsidiary risk (IATA) : --

### 14.4. Packing group

Packing group (UN) : --

## 14.5. Environmental hazards

Other information : None.

## 14.6. Special precautions for user

Special transport precautions : None.

### 14.6.1. Overland transport

Transport regulations (ADR) : Not subject

Transport regulations (RID) : Not subject

State during transport (ADR-RID) : Liquid

Classification code : --

Limited quantities (ADR) :

### 14.6.2. Transport by sea

Transport regulations (IMDG) : Not subject

Transport regulations (ADNR) : Not subject

Port Regulation Law : Not applicable

Limited quantities (IMDG) : Not applicable

EmS-No. (1) : --

MFAG-No : --

### 14.6.3. Air transport

Transport regulations (IATA) : Not subject

Instruction "cargo" (ICAO) : Not applicable

Instruction "passenger" (ICAO) : Not applicable

Instruction "passenger" - Limited quantities (ICAO) : Not applicable

## 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IBC code : None.

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Authorisations and/or restrictions on use (Annex XVII):

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	eni Antifreeze Bike S
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No ingredients are included in the REACH Candidate list (> 0,1 % m/m).

Contains no REACH Annex XIV substances.

Relevant 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). (et sequens). 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 (et sequens). Directives 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE, 93/88/CEE, 95/63/CE, 97/42/CE, 98/24/CE, 99/38/CE, 99/92/CE, 2001/45/CE, 2003/10/CE, 2003/18/CE (Health and safety on the workplace) Directive 98/24/EC (protection of the health and safety of workers from the risks related to chemical agents at work). Directive 92/85/CE (measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding) Directives 96/82/CE, 2003/105/CE and 2012/18/CE (Control of major-accident hazards involving dangerous substances) Directive 2004/42/CE (Limitation of emissions of Volatile Organic Compounds) Labelling according to directives 67/548/EEC and 1999/45/EC
VOC content	: = 0 % (EU, CH)
EURAL code (EWC)	: 16 01 14*

## 15.1.2. National regulations

Water hazard class (WGK) (D)	: 1 (according to composition)
WGK remark	: Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)
Storage class (LGK) (D)	: LGK 12 - Non-flammable liquids in non-flammable packages
VbF class (D)	: Not applicable.
Regional legislation	: National adoption of EU Directives concerning health and safety on the workplace. National laws on classification and labeling of dangerous substances/preparations (Adoption of Directive 67/548/CE and subsequent Adaptations to Technical Progress - ATP, and Directive 1999/45/CE). National adoption of EU Directives concerning control of major-accident hazards involving dangerous substances (96/82/CE - 2003/105/CE - 2012/18/CE). Relevant national laws on prevention of water pollution. Relevant national laws on protection of the health of pregnant workers (National adoption of Dir. 92/85/EEC).

## 15.2. Chemical safety assessment

**For the following substances of this mixture a chemical safety assessment has been carried out**

Ethandiol

## SECTION 16: Other information

Indication of changes	: Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]. Hazard pictograms (CLP). Hazard statements (CLP). Precautionary statements (CLP). Toxicological information. Specific target organ toxicity (repeated exposure):
Data sources	: This Safety Data Sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers.

Abbreviations and acronyms	: Complete text of the phrases H and R quoted in this Safety Data Sheet. These phrases are reported here for information only, and MAY NOT correspond to the classification of the product.
	N/A = Not applicable. N/D = Not available ACGIH = American Conference of Governmental Industrial Hygienists API = American Petroleum Institute CSR = Chemical Safety Report DNEL = Derived No Effect Level DMEL = Derived Minimum Effect Level EC50 = Effective Concentration, 50% EL50 = Effective Loading, 50 % EPA = Environmental Protection Agency IC50 = Inhibition Concentration, 50% LC50 = Lethal Concentration, 50% LD50 = Lethal Dose, 50% LL50 = Lethal Loading, 50% LOAEL = Low Observed Adverse Effects Level NOEL = No Observed Effects Level NOAEL = No Observed Adverse Effects Level OECD = Organization for Economic Cooperation and Development PNEC = Predicted No-Effect Concentration PBT = Persistent, Bioaccumulative, Toxic STOT = Single Target Organ Toxicity (STOT) RE = (Single Target Organ Toxicity) Repeated exposure (STOT) SE = (Single Target Organ Toxicity) Single exposure TLV®TWA = Threshold Limit Value® – Time-Weighted Average TLV®STEL = Threshold Limit Value® – Short Term Exposure Limit UVCB = Substance of Unknown or Variable composition, Complex reaction products or Biological materials vPvB = very Persistent, very Bioaccumulative WAF = Water Accommodated Fraction.
Training advice	: Provide adequate training to professional operators for the use of PPEs, according to the information contained in this Safety Data Sheet.
Other information	: Do not use the product for any purposes that have not been advised by the manufacturer. In that case, the user could be exposed to unpredictable risks.

Full text of R-, H- and EUH-phrases: these phrases are reported here for information only, and MAY NOT correspond to the classification of the product.:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H302	Harmful if swallowed
H361d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
R22	Harmful if swallowed
R63	Possible risk of harm to the unborn child
Xn	Harmful.

#### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 4 (Oral)	H302	Calculation method - provided by the supplier
STOT RE 2	H373	Calculation method - provided by the supplier



# eni Antifreeze Bike S

## Safety Data Sheet

According to Regulation (EC) No. 453/2010 - 830/2015

**Product code:** 1619-CLP

**Revision date:** 31/05/2015

**Version:** 2.0

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SDS EU ( Annex II) GENERAL

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*