

## Section 1: Identification of the substance/preparation and of the company/undertaking

### 1.1 Product identifier

Trade name: ZEO CARBON

### 1.2 Use of the substance / mixture

Cleaning liquid of carbon residue

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

ZEO TEC HELLAS GROUP IKE  
SPARTIA AREA, SESKLO VOLOS

TEL. : 2421095212

FAX: 2421095212

Postcode : 38500

[E-mail: Zthellasgroup@gmail.com](mailto:Zthellasgroup@gmail.com)

### 1.4 Emergency telephone number

210 -7793777

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008  
Skin corrosion (Category 1A), H314

### 2.2 Label information

Pictogram



Signal word: Danger

### Hazards statement(s)(recognized)

H314: Causes serious skin burns and eye injuries.

### Precautionary statement(s)

P 102: Away from children.

P 405: Keep it locked

P 280: Wear protective gloves / protective clothing / personal protective equipment for the eyes/face.

P 301 + P 330 + P 331: IF SWALLOWED: Rinse mouth. Do not induce vomiting.

P 303 + P 361 + P 353: IN CASE OF SKIN (OR HAIR) CONTACT: Remove immediately all contaminated clothing. Rinse the skin with water / have a shower.

P 305 + P 351 + P 338: IN CASE OF EYE CONTACT: Rinse thoroughly with water for several minutes. If there are contact lenses, remove them, if it is easy. Keep rinsing.

P 309 + P 311: IN CASE OF EXPOSURE OR ILLNESS: Call the **Emergency telephone number** or a doctor.

### 2.3 Other hazards

No other risks are known.

The product does not meet the criteria to be considered as either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) with the requirements of Regulation No 1907/2006 (EC), ANNEX XIII.

## 3. Composition/information on ingredients

### 3.1 Recommendation preparation

#### Hazardous ingredients

CAS No / EC	Ingredient(s)	NUMBER REACH	Classification according to 1272/2008/EC	Concentration
10213-79-3	Sodium metasilicate	01-2119449811-37	H314: Skin Corr./Irrit. 1B Eye Dam./ Irritat. 1 H335: STOT SE. 3 H290: Metal Corr. 1	0 % - 5%
939-625-7	Alkane C6-C8 (even numbered), 1-sulphonic acid, sodium salt	01-2119985168-23	Skin Corr. / Irrit. 2 Eye Dam. / Irrit. 2, H319, H315	0% - 5%
160901-19-9	Alcohols, C12-13-branched and linear, ethoxylated		Acute Tox .4 (oral), H302 Eye Dam. / Irrit. 1, H318 Aquatic chronic 3, H412	0% - 5%
111-76-2	2 butoxyethanol	01-2119475108-36	Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2 H302, H312, H332, H315, H319	5 % - 15 %
61789-40-0	Alkylamidopropyl betaine	01-2119513359-38	Eye Dam. 1, H318 Aquatic Chronic 3, H412	0% - 5%

## 4. First aid

### 4.1 Description of first aid measures

**In case of inhalation:** In case of fainting it is necessary to lie down and transfer to a firm lateral position.

**In case of skin contact:**

Immediately rinse with water and soap and rinse thoroughly. Immediately remove contaminated clothing.

**In case of eye contact:**

Wash the eyes with running water for a long time with the eyelids open.

**In case of ingestion:** Rinse mouth and then drink plenty of water.

### 4.2 Most important symptoms and effects, acute and subsequent

Not available.

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

Not available.

## 5. Firefighting measures

### 5.1 FIRE FIGHTING EQUIPMENT/Appropriate fire fighting equipment.

Use fire-extinguishing powder, foam, sand, spray water

### 5.2 Specific hazards arising from the substance or mixture

In a fire may be released: nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO2)

### 5.3 Recommendations for firefighters

Do not try to combat fire without proper protective equipment

Wear self-contained breathing apparatus. Remove all persons away from the incident.

#### Special protective equipment:

Wear protective clothing fire fighting (clothing, helmets, shoes, gloves) in accordance with the European Standard EN 469.

## 6. Accidental release measures

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

There is a risk of slipping of the pipelines of the product. Wear your personal protective clothing.

### 6.2 Environmental precautions:

Prevent the surface extension.

Do not empty into drains.

### 6.3 Methods and materials for restriction and cleaning:

Stop the leakage.

### 6.4 Reference to other sections:

For safe handling see 7. For personal protective equipment see 8. For disposal information see 13..

## 7. Handling and storage

### 7.1 Precautions for safe handling

Keep the container tightly closed.

#### Instructions of how to protect against fire and explosion hazard:

Special measures not required.

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

#### Storage:

Stored at temperatures below 30 °C.

Compatible packaging material: stainless steel, plastic.

**Instructions on storing materials together:** should be kept separately from oxidizing substances.

#### Further statements on the conditions of storage:

No

### 7.3 Specific end use(s)

Not available.

#### Additional recommendations for the formulation of technical installations:

No other recommendation, see Chapter 7.

## 8. Exposure controls/personal protection

### 8.1 Control parameters

Components with workplace control parameters:

Component	CAS -No	Value	Control Parameters	The basis
2-Butoxyethanol	111-76-2	TWA	20 ppm 98 mg/m <sup>3</sup>	Directive 2000/39/EC establishing a first list of indicative levels of exposure for workers
	Comments	Recognizes the possibility of a significant uptake via the Skin Indicative concentration limit		
		STEL	50 ppm	Directive 2000/39/EC establishing a first list of indicative levels of exposure for workers
		Recognizes the possibility of a significant uptake via the Skin Indicative concentration limit		
		TWA	25 ppm	indicative level of exposure for workers
		The indication Skin (S), which highlights certain chemical agents of the table in paragraph 1 of Article 3, implies the possible contribution of these chemical agents to the overall exposure of the worker and the amount that is absorbed through the skin in direct contact with them.		

#### Sodium metasilicate

Secondary level without consequences (DNEL) (DNEL)	oral / (mg/kg bod.)	Inhalation/ mg/m <sup>3</sup>	Through the skin
Workers - Acute – systemic effects	-	-	-
Workers - Acute - local effects	-	-	-
Workers – Long-term - systemic effects	-	6.22	1.49
Workers - Long-term - local effects	-	-	-
Consumers - Acute - systemic effects	-	-	-
Consumers - Acute - local effects	-	-	-
Consumers - Long-term - systemic effects	0.74	1.55	0.74
Consumers - Long-term - local effects	-	-	-

	Secondary level without consequences
PNEC Water (fresh)	7.5 mg/l
PNEC water (sea water)	1 mg/l
PNEC Water (interrupted)	7.5 mg/l
PNEC precipitate	Not available
PNEC Territory	Not available
PNEC processing factory waste	1000 mg/l
PNEC secondary poisoning (oral)	Does not apply

## 8.2 Exposure controls

### Personal protective equipment:

### General protective and sanitary measures:

During use do not eat, drink or smoke. Keep away from food, drinks and feed. Immediately remove any dirty or wet garments. Wash hands before breaks and after work. Avoid contact with eyes and skin.

**Respiratory protection:**

Not necessary

**Hand protection:**

Protective gloves: The material of the gloves should be impenetrable and resistant to the product.

Because of the lack of testing no glove material can be proposed for the product .

Select the glove material taking into account the endurance times, penetration and degradation.

Glove material: Nitrile rubber.

Choosing the right glove depends not only on the material, but also the overall quality characteristics, which vary depending on the manufacturer. EN 374.

Penetration time of glove material: For the chemicals listed below, the endurance time should be at least 480 minutes (Penetration according to EN 374). The exact endurance time of the protective gloves is given by the manufacturer and must always be respected.

**Eye protection:**

Tightly fitting safety goggles.

**Body protection:**

Use of protective clothing.

**9. Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

<b><u>General information</u></b>	
Appearance:	Format: Light liquid
Color:	-
Odour:	characteristic
Odour threshold:	-
pH at 20°C:	13 ± 0.5
Melting point/ Liquidation:	-
Boiling point and boiling range:	-
Flashpoint:	Not self-igniting
Decomposition temperature:	Not applicable
Flammability	Not self-igniting
Explosive properties:	No risk of explosion
Risk of explosion range:	
Lower:	Not applicable
Senior:	Not applicable
Vapor pressure:	Not applicable
Density at 20°C:	1,05 g/cm <sup>3</sup>
Relative density	No data available
Vapor Density	Not applicable
Evaporation Speed	Not applicable
Solubility in water at 20° C:	Full
Partition coefficient (n-Octanol / H2O) at 23°C	No data available
Viscosity:	
Dynamic:	Not applicable
Kinematic:	Not applicable

## 9.2 OTHER INFORMATION

No other relevant information available.

### 10. Stability and reactivity

#### 10.1 Reactivity

No information available about the reactivity of the product or its components'.

#### 10.2 Chemical stability

##### Thermal decomposition / Conditions to avoid:

It does not decompose if used properly.

#### 10.3 Possibility of hazardous reactions

No such reactions known.

#### 10.4 Conditions to avoid

No information available.

#### 10.5 Incompatible materials:

No information available.

### 11. Toxicological information

#### Alkane C6-C8 (even numbered), 1-sulphonic acid, sodium salt

Alkane C6-C8 (even numbered), 1-sulphonic acid, sodium salt

DL50: > 1550 mg/kg (rat)

DL50: > 2000 mg/kg (rat)

Initial reaction to the skin:

Irritating to the skin and the mucous membranes.

To the eye:

Irritating.

Sensitization:

Non-sensitizer.

Repeated dose toxicity:

NOAEL (oral/subchronic; rat): 430 mg/Kg/jour

Target organs: liver

#### Alcohols, C12-13- branched and linear, ethoxylated

Acute toxicity

Acute oral toxicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO): LD50 rat: > 300 - 2,000 mg/kg

According to results from our own tests/available literature: Harmful if swallowed.

Acute inhalation toxicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO): No such evidence available.

Acute toxicity to the skin

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO): LD 50 rabbit: > 2,000 mg / kg

Examined Group (literature importance)

Based on the available data, the criteria for classification are not met.

Corrosion and skin irritation

#### Skin irritation

Alcohols, branched C12-13 and linear, ethoxylated (>5 - <15 EO):

Rabbit: non-irritant

Examined Group

According to results from our own tests/available literature

Based on the available data, the criteria for classification are not met.

#### Serious damage/irritation to eyes

Eye irritation

Alcohols, branched C12-13 and linear, ethoxylated (>5 - <15 EO):

Rabbit: irreversible effects in the eyes

According to results from our own tests/available literature

Examined Group

Causes severe damage to the eyes

#### Respiratory sensitization or skin sensitization

Sensitization

Alcohols, branched C12-13 and linear, ethoxylated (>5 - <15 EO):

Experiment to maximize (GPMT) Guinea-pig: Not sensitized

Examined Group (Literature importance)

Based on the available data, the criteria for classification are not met.

#### Germ cell mutagenicity

Genotoxicity in vitro

Alcohols, branched C12-13 and linear, ethoxylated (>5 - <15 EO):

In-vitro experiments in-vitro did not show mutagenic effects

Examined Group

According to results from our own tests/available literature

#### Genotoxicity in-vivo

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO): in-vivo experiments did not show mutagenic effects

Examined Group (Literature importance)

Remarks

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

Based on the available data, the criteria for classification are not met.

#### Carcinogenicity

##### Carcinogenicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

The substance has been proven to be non-genotoxic and, therefore, is not expected to have carcinogenic potential.

Examined Group (bibliographical importance)

#### Comments

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

Based on the available data, the criteria for classification are not met.

#### Reproduction toxicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

Reproductive Toxicity Studies on two generations of rats

NOAEL ((parents):> 250 mg/kg (referred to in the body weight and the day.)

NOAEL (F1): > 250 mg/kg (refers to body weight and day)

NOAEL (F2):> 250 mg/kg (refers to body weight and the day)

Examined Group (Literature importance)

#### Remarks

Reproductive toxicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):  
Based on the available data, the criteria for classification are not met.

#### Teratogenicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

Rat; oral

NOAEL: > 50 mg/kg (refers to body weight and day)

NOAEL (mother): 50 mg/kg (refers to body weight and day); toxicity study in two-generation reproduction

Examined Group (Literature importance)

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO): rat skin;

NOAEL: > 250 mg/kg (refers to the body weight and day)

NOAEL (mother): 250 mg/kg (refers to body weight and day); toxicity study in two-generation reproduction

Examined Group

(Literature importance)

#### Remarks - Teratogenicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

Based on the available data, the criteria for classification are not met.

#### STOT- single exposure report

##### Remarks

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

The substance or mixture is not classified as toxic to specific target organs, after single exposure.

#### STOT- repeated exposure report

##### Remarks

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

The substance or mixture is not classified as toxic to specific target organs, after repeated exposure.

#### Repeated dose toxicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO): rat; oral; 2 years

NOAEL: 50 mg/kg (refers to body weight and the day.)

Target organs: liver, heart, kidney

Symptoms: decreased body weight gain, weight increase of organs

Examined Group

(Literature importance)

#### Suction toxicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO): Not applicable

#### Toxicological information

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

Toxicokinetics

Examined Group

The substance is expected to be absorbed and excreted at a rapid rate.

(Literature importance)

#### **Sodium metasilicate**

##### Acute toxicity

###### Ingestion

The material will cause chemical burns. All the symptoms of acute toxicity are due to high toxicity.

LD50 oral (rat) 1152-1349 (mg/kg body weight)

###### Inhalation

Dust is extremely irritating to the respiratory tract. All symptoms of acute toxicity are due to high toxicity.

LC50 inhalation (rat) > 2.06 g/m<sup>3</sup>

**Contact with skin**

The material will cause chemical burns. It can cause if the eye is not washed immediately.

LD50 dermal (Rat) >5000 (mg/kg body weight)

Corrosion and skin irritation Corrosive to: Skin  
Corrosive to: Eyes

Serious damage / irritation of the eyes

Sensitization No sensitization (LLNA)

Mutagenicity No evidence of toxigenicity. Negative in vitro/in vivo

Carcinogenicity There are no warnings about the structure

Reproductive toxicity There is no evidence of reproductive toxicity or developmental toxicity.

STOT-single exposure Irritating to respiratory system

STOT- repeated exposure Not listed NOAEL oral (mouse) 227 (mg/kg body weight / day)

Aspiration toxicity Not classified

Other information Not applicable

**Cocoamidopropyl Betaine**

<b>Significant prices classification-LD/LC50</b>
Oral LD50 2335 mg/kg (rat)
Skin LD50 >2000 mg/kg (rat)

**Initial irritation:**

On the skin: strong caustic effects on skin and mucous membranes.

In the eye: Strong caustic effects

Intense irritation and serious risk of damage to the eye damage

Sensitization: No sensitization known

Additional toxicological indications:

The product shows the following dangers according to the calculation method of the General EU Classification

Guidelines for Preparations as issued in the latest version

Corrosive

Irritating

If swallowed it causes burns to the mouth and throat as well as risk of perforation of the esophagus and stomach.

Toxicokinetics, metabolism and distribution:

Not classified.

Sensitization:

Not sensitng

Repeated dose toxicity:

NOAEL (oral) of the active substance: 300 mg/kg body weight / day

Not classified.

CMR effects (carcinogenicity, mutagenicity and reproductive toxicity):

No known significant effect or critical hazard

**12. Ecological information**

**Alkane C6-C8 (even numbered), 1-sulphonic acid, sodium salt**

Fish, CL50: > 100 mg/l

Daphnia, CE50: > 100 mg/l

Alga, NOEC: 6.25 mg/l

**Alcohols, C12-13- branched and linear, ethoxylated**

## 12.1 Toxicity

### Toxicity to fish

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

LC50 (96 h) Cyprinus carpio (Cyprinus): > 1 - 10 mg/l flow test; OECD Test Guideline 203

Results of our own tests/available literature

Examined Group

### Toxicity to fish - Chronic toxicity

Alcohols, C12-13- branched and linear, ethoxylated (>5 - <15 EO):

EC10 Pimephales promelas (Fathead carp): 0.21 mg/l;

Mortality (Bibliographic significance)

Examined Group

### Toxicity to daphnia and other aquatic molluscs

Alcohols, branched C12-13 and linear, ethoxylated (>5 - <15 EO):

EC50 (48 h) Daphnia magna: > 1 - 10 mg/l; static test?

OECD TG 202

Results of our own tests/ bibliographic values

Examined Group

### Toxicity to daphnia and other aquatic molluscs - Chronic toxicity

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

EC10 Daphnia magna: 0.36 mg / l;

Reproduction test? OECD TG 211; (bibliographic significance)

Examined Group

### Toxicity to aquatic plants

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

EC50 (72 h) Desmodesmus subspicatus (green algae):> 1-10 mg / l; ; static test?

OECD TG 201; results of our own tests / bibliographic values

Examined Group

### Toxicity to bacteria

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

EC50 activated sludge: 140 mg / l; Obstruction of breathing

Examined Group(Bibliographical significance)

### Toxicity to terrestrial plants

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

vegetation, growth; NOEC: 10 mg / kg; Lepidium sativum (cardamom); OECD TG 208

results of our own tests / bibliographic values

Examined group

### Toxicity to other land non-mammals

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

the study is scientifically unjustified

Justification:

It is easily biodegradable.

## 12.2 Persistence and degradability

### Biodegradability

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

It is biologically easily degraded. > 60%; 28 d; aerobic?

OECD 301 B Guidelines

results of our own tests / bibliographic values

Examined group

## 12.3 Possibility of bioaccumulation

### Bioaccumulation

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO): Bioaccumulation is unlikely.

(bibliographic significance)

## 12.4 Mobility on the ground

### Mobility

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

Absorption / Soil Koc: > 5000; QSAR (bibliographic significance) stabilized strong adsorption to the soil

#### 12.5 Results of the PBT and vPvB assessment

##### Results of the PBT assessment

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):  
Based on the available data, the classification criteria are not met.

#### 12.6 Other adverse effects

##### General suggestions

Alcohols, branched C12-13 and linear, ethoxylated (> 5 - <15 EO):

Harmful to aquatic organisms, with long-lasting effects.

Concerning the ingredient disodium metasilicate

Fish Brachydanio(Brachydanio rerio) EC50 (96 hours) 210 mg/l

Aquatic invertebrates (Daphnia the large) EC50 (48 hours) 1700 mg/l (in proportion)

Concerning the ingredient Cocoamidopropyl Betaine

Aquatic toxicity

EC10 0,135 mg/l (freshwater fish)

LC50 (static) 1,9 mg/l (freshwater invertebrates)

1,11 mg/l (freshwater fish)

#### 12.2 Persistence and degradability

Easily biodegradable according to OECD Guideline 301 B, OECD 301C, OECD 301 D and OECD 301F.

#### 12.3 Bioaccumulative potential

Low

#### 12.4 Soil Mobility

The substance is readily dispersible in water and readily biodegradable. Further ecological indications:

General instructions: not allowed to penetrate into groundwater, discharge it into the aquatic environment undiluted.

#### 12.5 Results of the PBT and vPvB assessment

PBT: Not classified.

vPvB: Not classified.

#### 12.6 Other adverse effects

No other relevant information available.

### 13. Disposal considerations

#### 13.1 Waste management methods

Recommendation:

It must not be deposited with common waste.

Uncleaned packaging:

Recommendation:

Disposal should be in accordance with official regulations.

Cleaning agent: Water..

### 14. Transport information

The transport of the product is safe in the company's containers and does not require additional precautions.

**14.1 UN Number** **Not applicable.**  
ADR, ADN, IMDG, IATA -

**14.2 Proper shipping name** **Not applicable.**  
ADR, ADN, IMDG, IATA -

**14.3 Transport hazard class/classes** **Not applicable.**  
ADR, ADN, IMDG, IATA  
Class -

**14.4 Packing group** **Not applicable.**  
ADR, IMDG, IATA -

**14.5 Environmental hazards:**  
Environmentally hazardous: **No**

**14.6 Special precautions for the user**      **Not applicable**

**15. Regulatory information**

**15.1 regulations/legislation regarding safety, health and the environment for the substance or mixture**

Ingredients according to the Detergent Legislation 648/2004/EC  
It contains among others below 5% anionic, non-ionic and amphoteric surfactants.

**15.2 Chemical safety assessment**

A chemical safety assessment for the mixture has not been carried out.

**16. Other information**

**Full text of H and EUH phrases mentioned in Section 3**

H319 Causes severe eye irritation.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H318 Causes severe eye damage  
H412 Harmful to aquatic life with long lasting effects.  
H302 Harmful if swallowed.  
H335 May cause respiratory irritation.  
H290 May corrode metals.  
H312 Harmful in contact with skin.  
H332 Harmful if inhaled.

**Footnotes and acronyms:**

DNEL - Derived No Effect Level  
EUH - CLP Special Risks Declaration  
ABT - Persistent, Bioaccumulative and Toxic  
PNEC - Predicted No Effect Concentration  
REACH number - REACH registration number  
vPvB - very persistent and very bioaccumulative

The above information concern only the specific product of our company based on our current level of knowledge and is not a guarantee of any specific product features.