

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/20/2013

Reviewed on 06/20/2013

## \* 1 Identification

- **Product identifier**
- **Trade name:** Esdogen Booster
- **Article number:** 2269
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation**  
Enzyme-containing cleaning for texties heavily soiled with fat and/or albumin for application in the ESDOGEN system.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
- **Manufacturer:**  
Chemische Fabrik Kreussler & Co. GmbH  
Postfach 120454  
D-65082 Wiesbaden
- **Supplier:**  
Kreussler Inc., 6103 Johns Road Suit 7, Tampa, FL 33634,  
Phone 813-884-1499, Fax 813-884-1599,  
Internet: www.kreussler.com, e-mail: office-tampa@kreussler.com
- **Information department:**  
Abteilung TQM  
Herr Vogel  
+49 (0) 611 9271-175  
Kurt.Vogel@kreussler.com
- **Emergency telephone number:** +49 (0) 611 9271-0

## \* 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Irritant  
Risk of serious damage to eyes.
  - **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
  - **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- 
- **Label elements**
  - **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with directives on hazardous materials.
  - **Code letter and hazard designation of product:**
- 
- Xi Irritant
- **Risk phrases:**  
Risk of serious damage to eyes.
  - **Safety phrases:**  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Wear eye/face protection.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2  
Fire = 2  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 2 Health = 2  
FIRE 2 Fire = 2  
REACTIVITY 0 Reactivity = 0

- **Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## \* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

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

- **Dangerous components:**

106232-83-1	Alcohols C13-C15 branched and linear, ethoxylated Xn R22; Xi R41	15-30%
112-34-5	2-(2-butoxyethoxy)ethanol Xi R36	5.0-15%
69227-21-0	alcohols C12 – C18 ethoxylated, propoxylated Xi R38	5.0-15%
106232-83-1	Aliphatic alcohol, C13-15, predominantly linear, ethoxylated Xi R41; N R50	5.0-15%
9014-01-1	Subtilisin Xn R22-42; Xi R37/38-41; N R50	≤1%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Rinse with warm water.

If skin irritation continues, consult a doctor.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## \* 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **Special hazards arising from the substance or mixture** Product itself does not burn.
- **Advice for firefighters**
- **Protective equipment:** Use normal protective clothing.
- **Additional information**  
Product does not burn  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### \* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### \* 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### \* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

#### · **Components with limit values that require monitoring at the workplace:**

##### 112-34-5 2-(2-butoxyethoxy)ethanol (5.0-15%)

TLV	Long-term value: 67.5* mg/m <sup>3</sup> , 10* ppm *Inhalable fraction and vapor
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##### 64-17-5 ethanol (1.0-5.0%)

PEL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm

##### 57-55-6 propane-1,2-diol (1.0-5.0%)

WEEL	Long-term value: 10 mg/m <sup>3</sup>
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Avoid contact with the eyes and skin.  
Do not eat, drink, smoke or sniff while working.  
Immediately remove all soiled and contaminated clothing.

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Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.

- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

- **Material of gloves**  
PVC or PE gloves  
Recommended thickness of the material:  $\geq 0.4$  mm
- **Not suitable are gloves made of the following materials:**  
Leather gloves  
Strong gloves
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

## \* 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Characteristic

· pH-value at 20 °C (68 °F): 7

#### · Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** 100 °C (212 °F)

· **Flash point:** 65 °C (149 °F) (ASTMD93(PMCC))

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1 g/cm<sup>3</sup> (8.345 lbs/gal)

#### · Solubility in / Miscibility with

**Water:** Fully miscible.

#### · Viscosity:

**Dynamic at 20 °C (68 °F):** 80 mPas

#### · Solvent content:

**Organic solvents:** 4.2 %

· **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.

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- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### \* 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

#### 106232-83-1 Alcohols C13-C15 branched and linear, ethoxylated

Oral	LD-50	>2000 mg/kg (rat)
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#### 112-34-5 2-(2-butoxyethoxy)ethanol

Oral	LD-50	3384 mg/kg (rat)
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Dermal	LD-50	2700 mg/kg (bunny)
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#### 69227-21-0 alcohols C12 – C18 ethoxylated, propoxylated

Oral	LD-50	>2000 mg/kg (rat)
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#### 106232-83-1 Aliphatic alcohol, C13-15, predominantly linear, ethoxylated

Oral	LD-50	>2000 mg/kg (rat)
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	EC-10 16 h	> 10000 mg/L (Pseudomonas putida)
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#### 9014-01-1 Subtilisin

Oral	LD-50	1800 mg/kg (rat)
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Dermal	LD-50	> 2 mL mg/kg (rabbit)
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Inhalative	LC-50/4 h	0.8 mg/m <sup>3</sup> (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

64-17-5	ethanol	1
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

### \* 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

#### 106232-83-1 Alcohols C13-C15 branched and linear, ethoxylated

EC-10	>1000 mg/L (Belebtschlamm)
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EC-50 48h	1-10 mg/l (Daphnia magna) (Literaturangabe)
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EC-50 72h	1 - 10 mg/l (Scenedesmus subspicatus) (Literaturangabe)
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LC-50 96h	1-10 mg/l (Brachydanio rerio)
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#### 112-34-5 2-(2-butoxyethoxy)ethanol

EC-10 (17 h)	1170 mg/l (Pseudomonas putida)
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EC-50 24h	2850 mg/l (Daphnia magna)
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LC-50 96h	1300 mg/l (Lepomis macrochirus)
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NOEC (96h)	>100 mg/l (Desmodesmus subspicatus)
<b>69227-21-0 alcohols C12 – C18 ethoxylated, propoxylated</b>	
LC-50 96h	1-10 mg/l (Leuciscus idus)
<b>106232-83-1 Aliphatic alcohol, C13-15, predominantly linear, ethoxylated</b>	
EC-50 48h	0.1 - 1 mg/l (aquatische Invertebraten)
EC-50 72h	0.1-1 mg/l (Scenedesmus subspicatus)
LC-50 96h	1-10 mg/l (Brachydanio rerio)
<b>9014-01-1 Subtilisin</b>	
EC-50 48h	0.586 mg/l (Daphnia magna) (OECD TG 202)
ErC-50 72h	0.83 mg/l (Alge, akut) (OECD TG 201)
LC-50 96h	8.2 mg/l (Fische, akut) (OECD TG 203)
	16 mg/l (Regenbogenforelle)
NOEC (48h)	0.5 mg/l (Daphnia magna)
	0.63 mg/l (Selenastrum capricomutum)

- **Persistence and degradability** No further relevant information available.
- **Other information:** The product is biodegradable.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.  
Do not allow product to reach ground water, water course or sewage system.  
The product may not be released into the environment without control.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### \* 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Dispose of in accordance with local, state, and federal Regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>Label</b>	-
· <b>ADN/R Class:</b>	Void

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· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Danger code (Kemler):	-
· EMS Number:	-
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

## \* 15 Regulatory information

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

· Section 355 (extremely hazardous substances):	None of the ingredient is listed.	
· Section 313 (Specific toxic chemical listings):	None of the ingredients is listed.	
· TSCA (Toxic Substances Control Act):	All ingredients are listed.	
· Proposition 65		
· Chemicals known to cause cancer:	None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for females:	None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	64-17-5   ethanol	
· Cancerogenity categories		
· EPA (Environmental Protection Agency)	None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)	64-17-5   ethanol	A3
· MAK (German Maximum Workplace Concentration)	64-17-5   ethanol	5
· NIOSH-Ca (National Institute for Occupational Safety and Health)	None of the ingredients is listed.	
· OSHA-Ca (Occupational Safety & Health Administration)	None of the ingredients is listed.	
· Canadien Substances Listings:		
· Canadien Domestic Substances List (DSL):	All ingredients are listed.	
· Canadien Ingredient disclosure list (limit 0.1%)	All ingredients are listed.	
· Canadien Ingredient disclosure list (limit 1%)	112-34-5   2-(2-butoxyethoxy)ethanol	

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57-55-6 propane-1,2-diol

- **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Hazard symbols:**



Xi Irritant

- **Risk phrases:**

Risk of serious damage to eyes.

- **Safety phrases:**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Wear eye/face protection.

- **National regulations:**

- **Technical instructions (air):**

Class	Share in %
I NK	$\leq 1$ 5,0-15

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### \* 16 Other information

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

The information of Items 4 through 8 and 10 through 12 partially refers not to the use and the proper application of the product (see Directions for Use/Product Information) but to the release of larger quantities in the case of accidents and irregularities.

The information exclusively describes the safety requirements of the product(s) and is based on the present state of our experience.

Non-ionic tensides can have varying characteristics and classifications despite same CAS-No.

- **Department issuing MSDS:**

Kurt Vogel  
Tel. +49 (0)611 9271-175

- **Contact:** Kurt Vogel

- \* **Data compared to the previous version altered.**