

## Cetamine G900

article number: 47001

Version number: Vers. 8.0  
Replaces version of: 2021-03-31 (Vers. 7)

Revision: 2021-10-12

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

#### 1.1 Product identifier

<b>Trade name</b>	<b>Cetamine G900</b>
<b>Article number</b>	<b>47001</b>
<b>Identifiers (European Union)</b>	
<b>Registration number (REACH)</b>	not relevant (mixture)

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

<b>Relevant identified uses</b>	Water treatment chemical Professional uses Industrial uses
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#### 1.3 Details of the supplier of the safety data sheet

Kurita UK Ltd  
13 Nasmyth Square, Houstoun Industrial Estate  
EH54 5GG Livingston  
United Kingdom

Telephone: +44 (0)131 449 6677  
e-mail: KEG\_PS@kurita-water.com  
Website: www.kurita.eu

<i>Name</i>	<i>Street</i>	<i>Postal code/city</i>	<i>Telephone</i>
Kurita Europe GmbH	Theodor-Heuss-Anlage 2	DE-68165 Mannheim	+ 49 621 1218-3000

#### 1.4 Emergency telephone number

Emergency CONTACT (24-Hour-Number):  
Europe: GBK GmbH +49 (0)6132-84463  
International: GBK/Infotrac ID 108808: (001) 352 323 3500  
Assistance in mother tongue.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 (CLP)

<i>Hazard class</i>	<i>Hazard class and category</i>	<i>Category</i>	<i>Hazard statement</i>
skin corrosion/irritation	Skin Corr. 1B	1B	H314
serious eye damage/eye irritation	Eye Dam. 1	1	H318
specific target organ toxicity - single exposure (respiratory tract irritation)	STOT SE 3	3	H335
hazardous to the aquatic environment - chronic hazard	Aquatic Chronic 3	3	H412

For full text of abbreviations: see SECTION 16.

#### The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

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## 2.2 Label elements

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

**Signal word** danger

**Pictograms**

GHS05, GHS07



### Hazard statements

H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

### Precautionary statements

P260 Do not breathe mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/....  
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.  
P310 Immediately call a POISON CENTER/doctor.

**Hazardous ingredients for labelling** 2-diethylaminoethanol

## 2.3 Other hazards

This material is combustible, but will not ignite readily.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to 1272/2008/EC	M-Factors
2-diethylaminoethanol	CAS No 100-37-8 EC No 202-845-2 Index No 603-048-00-6 REACH Reg. No 01-2119488937-14-xxxx	10 – < 25	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Acute Tox. 3 / H311 Acute Tox. 3 / H331 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT SE 3 / H335	
benzotriazole	CAS No 95-14-7 EC No 202-394-1 REACH Reg. No 01-2119979079-20-xxxx	1 – < 3	Acute Tox. 4 / H302 Eye Irrit. 2 / H319 Aquatic Chronic 2 / H411	

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<i>Name of substance</i>	<i>Identifier</i>	<i>Wt%</i>	<i>Classification acc. to 1272/2008/EC</i>	<i>M-Factors</i>
(Z)-N-9-octadecenylpropane-1,3-diamine	CAS No 7173-62-8 EC No 230-528-9 REACH Reg. No 01-2119487002-46-xxxx	< 1	Acute Tox. 4 / H302 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT RE 1 / H372 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	M-factor (acute) = 10.0
potassium hydroxide	CAS No 1310-58-3 EC No 215-181-3 Index No 019-002-00-8 REACH Reg. No 01-2119487136-33-xxxx	< 1	Met. Corr. 1 / H290 Acute Tox. 4 / H302 Skin Corr. 1A / H314 Eye Dam. 1 / H318	

For full text of abbreviations: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Immediately call a doctor.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Immediately call a doctor.

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

Causes severe skin burns and eye damage. Splashes cause strong tearing, pain, may cause permanent visual impairment. Prolonged contact may cause dryness, redness, burns, blistering and ulceration. Can be partially absorbed by the skin. Ingestion causes pain, burns, abdominal pain, possible general impact (shock).

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

No specific antidot is known. Treatment of the symptoms.

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Water spray, Alcohol resistant foam, Fire extinguishing powder, Carbon dioxide (CO<sub>2</sub>)

##### Unsuitable extinguishing media

Water jet

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

none

##### Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

#### 5.3 Advice for firefighters

Keep containers cool with water spray. In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

##### Special protective equipment for firefighters

Chemical protection suit, Use suitable breathing apparatus

### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Remove persons to safety.

##### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. Chemicals generally shouldn't reach surface water.

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

##### Advice on how to contain a spill

Covering of drains

##### Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.), Material for neutralising like diluted acetic acid.

##### Appropriate containment techniques

Use of adsorbent materials.

##### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

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### 6.4 Reference to other sections

Section 7: Handling and storage. See also to sections 8 and 13 of the safety data sheet.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Recommendations

#### Measures to prevent fire as well as aerosol and dust generation

Keep away from sources of ignition - No smoking. Use only in well-ventilated areas.

#### Handling of incompatible substances or mixtures

Do not mix with acids.

#### Keep away from

Acids, Oxidisers

#### Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

#### Specific designs for storage rooms or vessels

Unsuitable materials: light- and brass alloys, Steel.

#### Storage temperature

Recommended storage temperature: 5 – 40 °C.

#### Packaging compatibilities

Keep only in original container. Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

Water treatment chemical. Professional uses. Industrial uses.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Occupational exposure limit values (Workplace Exposure Limits)									
Cou ntry	Name of agent	CAS No	Nota- tion	Identi- fier	TWA [ppm ]	TWA [mg/ m <sup>3</sup> ]	STEL [ppm ]	STEL [mg/ m <sup>3</sup> ]	Source
GB	potassium hydroxide	1310-58-3		WEL				2	EH40/2005

#### Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)  
TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

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### Relevant DNELs of components of the mixture

<i>Name of substance</i>	<i>CAS No</i>	<i>End-point</i>	<i>Threshold level</i>	<i>Protection goal, route of exposure</i>	<i>Used in</i>	<i>Exposure time</i>	<i>Source</i>
2-diethylamino-ethanol	100-37-8	DNEL	18.3 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylamino-ethanol	100-37-8	DNEL	10.7 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylamino-ethanol	100-37-8	DNEL	2.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	DNEL	4.2 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	DNEL	0.24 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	DNEL	2.1 mg/m <sup>3</sup>	human, inhalatory	consumer (private households)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	DNEL	0.12 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	DNEL	0.12 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	DNEL	0.12 mg/kg bw/day	human, oral	consumer (private households)	acute - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	DNEL	39.5 µg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	DNEL	5.6 µg/kg	human, dermal	worker (industry)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	DNEL	6.96 µg/m <sup>3</sup>	human, inhalatory	consumer (private households)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	DNEL	2 µg/kg	human, dermal	consumer (private households)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	DNEL	2 µg/kg	human, oral	consumer (private households)	chronic - systemic effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
potassium hydroxide	1310-58-3	DNEL	1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
potassium hydroxide	1310-58-3	DNEL	1 mg/m <sup>3</sup>	human, inhalatory	consumer (private households)	chronic - local effects	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

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### Relevant PNECs of components of the mixture

<i>Name of substance</i>	<i>CAS No</i>	<i>Endpoint</i>	<i>Threshold level</i>	<i>Environmental compartment</i>	<i>Source</i>
2-diethylaminoethanol	100-37-8	PNEC	0.062 mg/l	freshwater	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	PNEC	0.006 mg/l	marine water	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	PNEC	10 mg/l	sewage treatment plant (STP)	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	PNEC	0.673 mg/kg	freshwater sediment	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	PNEC	0.067 mg/kg	marine sediment	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	PNEC	0.098 mg/kg	soil	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	PNEC	0.019 mg/l	freshwater	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	PNEC	0.019 mg/l	marine water	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	PNEC	0.1 mg/l	sewage treatment plant (STP)	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	PNEC	0.22 mg/kg	freshwater sediment	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	PNEC	0.22 mg/kg	marine sediment	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	PNEC	0.03 mg/kg	soil	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	PNEC	10 µg/l	freshwater	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	PNEC	1 µg/l	marine water	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	PNEC	251 µg/l	sewage treatment plant (STP)	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	PNEC	1.72 mg/kg	freshwater sediment	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

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Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Source
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	PNEC	172 µg/kg	marine sediment	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	PNEC	10 mg/kg	soil	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

### 8.2 Exposure controls

#### Appropriate engineering controls

Exhaust ventilation. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Individual protection measures (personal protective equipment)

Guarantee that the eye flushing systems and safety showers are closely located to the working place.

#### Eye/face protection

Wear eye/face protection.

#### Skin protection

Chemical resistant protective clothing.

#### Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. In case of spray contact at least protection index 2 recommended, according to more than 30 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.4 mm

In case of prolonged and intensive contact protection index 6 recommended, according to more than 480 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.7 mm.

#### Type of material

PVC: polyvinyl chloride, PE: polyethylene, CR: chloroprene (chlorobutadiene) rubber, NBR: acrylonitrile-butadiene rubber, IIR: isobutene-isoprene (butyl) rubber, FKM: fluoro-elastomer

#### Breakthrough times of the glove material

Breakthrough times and swelling properties of the material must be taken into consideration

#### Other protection measures

Wash hands thoroughly after handling.

#### Respiratory protection

Respiratory protection in case of formation of gases/vapours/mists. Type: ABEK (combined filters against gases and vapours, colour code: Brown/Grey/Yellow/Green). Type: K (against ammonia and organic ammonia derivatives, colour code: Green). In case of intensive or longer exposure: Self-contained breathing apparatus (EN 133).

#### Environmental exposure controls

Disposal considerations: see section 13.



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### SECTION 9: Physical and chemical properties

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

##### Appearance

Physical state	liquid
Colour	light yellow
Odour	characteristic
Odour threshold	no data available

##### Other safety parameters

pH (value)	ca. 12.3 (20 °C) (base)
Melting point/freezing point	not determined
Initial boiling point and boiling range	ca. >100 °C
Flash point	>61 °C not relevant
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Upper/lower flammability or explosive limits	not relevant
Vapour pressure	not determined
Vapour density	this information is not available
Density	ca. 1.01 g/cm <sup>3</sup> at 20 °C

##### Solubility(ies)

<b>Water solubility</b>	miscible in any proportion
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##### Partition coefficient

<b>- n-octanol/water (log KOW)</b>	this information is not available
Auto-ignition temperature	not applicable
Decomposition temperature	no data available

##### Viscosity

<b>Dynamic viscosity</b>	<30 mPa s at 20 °C
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Explosive properties	none
Oxidising properties	none

### 9.2 Other information

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

Dangerous/dangerous reactions with Acids.

### 10.4 Conditions to avoid

Heat, Frost.

### 10.5 Incompatible materials

Oxidisers

Release of flammable materials with:

Light metals (due to the release of hydrogen in an acid/alkaline medium)

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Acute toxicity

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

May be harmful in contact with skin or if inhaled.

Acute toxicity of components of the mixture						
<i>Name of substance</i>	<i>CAS No</i>	<i>Exposure route</i>	<i>Endpoint</i>	<i>Value</i>	<i>Species</i>	<i>Source</i>
2-diethylaminoethanol	100-37-8	dermal	LD50	885 mg/kg	guinea pig	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

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Acute toxicity of components of the mixture						
<i>Name of substance</i>	<i>CAS No</i>	<i>Exposure route</i>	<i>Endpoint</i>	<i>Value</i>	<i>Species</i>	<i>Source</i>
2-diethylaminoethanol	100-37-8	oral	LD50	1,320 mg/kg	rat	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	inhalation: vapour	LC50	4.6 mg/l/4h	rat	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	oral	LD50	500 mg/kg	rat	ECHA
benzotriazole	95-14-7	dermal	LD50	>2,000 mg/kg	rabbit	ECHA
potassium hydroxide	1310-58-3	oral	LD50	333 mg/kg	rat	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Respiratory or skin sensitisation**

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

**Germ cell mutagenicity**

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

**Carcinogenicity**

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

**Reproductive toxicity**

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

**Specific target organ toxicity - single exposure**

May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

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

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

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**SECTION 12: Ecological information**

**12.1 Toxicity**

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture						
<i>Name of substance</i>	<i>CAS No</i>	<i>Endpoint</i>	<i>Exposure time</i>	<i>Value</i>	<i>Species</i>	<i>Source</i>
2-diethylaminoethanol	100-37-8	LC50	96 h	>1,000 mg/l	fish	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	EC50	72 h	28 mg/l	algae	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	EC50	48 h	83.6 mg/l	aquatic invertebrates	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
2-diethylaminoethanol	100-37-8	ErC50	72 h	62.3 mg/l	algae	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	LC50	96 h	180 mg/l	fish	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	EC50	48 h	15.8 mg/l	aquatic invertebrates	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	ErC50	72 h	75 mg/l	algae	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecylpropane-1,3-diamine	7173-62-8	LC50	96 h	0.148 mg/l	fish	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecylpropane-1,3-diamine	7173-62-8	ErC50	72 h	507 µg/l	algae	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

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Aquatic toxicity (chronic) of components of the mixture						
<i>Name of substance</i>	<i>CAS No</i>	<i>Endpoint</i>	<i>Value</i>	<i>Species</i>	<i>Source</i>	<i>Exposure time</i>
2-diethylaminoethanol	100-37-8	growth (EbCx) 20%	>1,000 mg/l	microorganisms	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>	30 min
benzotriazole	95-14-7	EC50	940 mg/l	microorganisms	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>	3 h
benzotriazole	95-14-7	NOEC	<10 mg/l	microorganisms	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>	3 h
benzotriazole	95-14-7	growth (EbCx) 10%	0.97 mg/l	aquatic invertebrates	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>	21 d
(Z)-N-9-octadecylpropane-1,3-diamine	7173-62-8	EC50	290 µg/l	aquatic invertebrates	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>	21 d
(Z)-N-9-octadecylpropane-1,3-diamine	7173-62-8	EC50	66 mg/l	microorganisms	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>	3 h
(Z)-N-9-octadecylpropane-1,3-diamine	7173-62-8	NOEC	100 µg/l	aquatic invertebrates	European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>	21 d

### 12.2 Persistence and degradability

The relevant substances of the mixture are readily biodegradable.

Degradability of components of the mixture						
<i>Name of substance</i>	<i>CAS No</i>	<i>Process</i>	<i>Degradation rate</i>	<i>Time</i>	<i>Method</i>	<i>Source</i>
2-diethylaminoethanol	100-37-8	DOC removal	95 %	22 d		European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
benzotriazole	95-14-7	DOC removal	0.8 %	30 d		European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

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### Degradability of components of the mixture

<i>Name of substance</i>	<i>CAS No</i>	<i>Process</i>	<i>Degradation rate</i>	<i>Time</i>	<i>Method</i>	<i>Source</i>
benzotriazole	95-14-7	oxygen depletion	0 %	28 d		European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
(Z)-N-9-octadecenypropylpropane-1,3-diamine	7173-62-8	oxygen depletion	66 %	28 d		European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>

### 12.3 Bioaccumulative potential

A worth-mentioning accumulation in organisms is not expected.

### Bioaccumulative potential of components of the mixture

<i>Name of substance</i>	<i>CAS No</i>	<i>BCF</i>	<i>Log KOW</i>	<i>BOD5/COD</i>
2-diethylaminoethanol	100-37-8	<6.1	0.21 (23 °C)	
benzotriazole	95-14-7		1.34 (22.7 °C)	
(Z)-N-9-octadecenypropylpropane-1,3-diamine	7173-62-8		0.03 (pH value: 6.8, 25.7 °C)	

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Not applicable.

### 12.6 Other adverse effects

#### Endocrine disrupting potential

None of the ingredients are listed.

#### Remarks

Do not empty into drains or surface water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

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### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Do not empty into drains or surface water. Avoid release to the environment.

## SECTION 14: Transport information

<b>14.1 UN number</b>	2735
<b>14.2 UN proper shipping name</b>	AMINES, LIQUID, CORROSIVE, N.O.S.
<b>Technical name (hazardous ingredients)</b>	(2-diethylaminoethanol)
<b>14.3 Transport hazard class(es)</b>	
<b>Class</b>	8
<b>14.4 Packing group</b>	II
<b>14.5 Environmental hazards</b>	non-environmentally hazardous acc. to the dangerous goods regulations
<b>14.6 Special precautions for user</b>	
	There is no additional information.
<b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	
	The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

#### **Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)**

UN number	2735
Proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S., (2-diethylaminoethanol)
Class	8
Packing group	II
Danger label(s)	8



Environmental hazards	NO (not hazardous to the aquatic environment)
Tunnel restriction code (TRC)	E

#### **International Maritime Dangerous Goods Code (IMDG)**

UN number	2735
Proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S., (2-diethylaminoethanol)
Class	8
Marine pollutant	-
Packing group	II
Danger label(s)	8

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EmS	F-A, S-B
Segregation group	18 - Alkalis
Segregation codes	SG35
<b>International Civil Aviation Organization (ICAO-IATA/DGR)</b>	
UN number	2735
Proper shipping name	Amines, liquid, corrosive, n.o.s., (2-diethylamino-ethanol)
Class	8
Environmental hazards	no
Packing group	II
Danger label(s)	8



### SECTION 15: Regulatory information

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

##### Relevant provisions of the European Union (EU)

##### Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)			
<i>Name of substance</i>	<i>Name acc. to inventory</i>	<i>CAS No</i>	<i>Restriction</i>
Cetamine G900	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3

##### Legend

- R3
1. Shall not be used in:
    - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
    - tricks and jokes,
    - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
  2. Articles not complying with paragraph 1 shall not be placed on the market.
  3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
    - can be used as fuel in decorative oil lamps for supply to the general public, and,
    - present an aspiration hazard and are labelled with R65 or H304,
  4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
  5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
    - (a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
    - (b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
    - (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
  6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
  7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65



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Legend

or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

**List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list**

none of the ingredients are listed

**Seveso Directive**

2012/18/EU (Seveso III)

No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

**Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

none of the ingredients are listed

**Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

none of the ingredients are listed

**Water Framework Directive (WFD)**

none of the ingredients are listed

**Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013**

none of the ingredients are listed

**Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

none of the ingredients are listed

**Restrictions of occupation**

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

**15.2 Chemical Safety Assessment**

Chemical Safety Assessment: No.

**SECTION 16: Other information**

**Indication of changes (revised safety data sheet)**

Section	Former entry (text/value)	Actual entry (text/value)
2.2		Precautionary statements: change in the listing (table)
3.2		Hazardous ingredients: change in the listing (table)

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Section	Former entry (text/value)	Actual entry (text/value)
8.2	Type of material: PE: polyethylene, NBR: acrylonitrile-butadiene rubber, IIR: isobutene-isoprene (butyl) rubber	Type of material: PVC: polyvinyl chloride, PE: polyethylene, CR: chloroprene (chlorobutadiene) rubber, NBR: acrylonitrile-butadiene rubber, IIR: isobutene-isoprene (butyl) rubber, FKM: fluoro-elastomer
9.1	Flash point: >61 °C	Flash point: >61 °C not relevant
9.1	Upper/lower flammability or explosive limits: not determined	Upper/lower flammability or explosive limits: not relevant
9.1	Auto-ignition temperature: not determined	Auto-ignition temperature: not applicable
11.1	Acute toxicity: Based on available data, the classification criteria are not met.	Acute toxicity: Based on available data, the classification criteria are not met. May be harmful in contact with skin or if inhaled.
12.1		Aquatic toxicity (chronic) of components of the mixture: change in the listing (table)

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances

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<i>Abbr.</i>	<i>Descriptions of used abbreviations</i>
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	Substance or mixture corrosive to metals
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

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<i>Abbr.</i>	<i>Descriptions of used abbreviations</i>
WEL	Workplace exposure limit

**Key literature references and sources for data**

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU. ECHA: European Chemicals Agency, <http://echa.europa.eu/>.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

**Classification procedure**

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**List of relevant phrases (code and full text as stated in section 2 and 3)**

<i>Code</i>	<i>Text</i>
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.