

**Quatrodos Forte**

Date of compilation: 16/01/2014

Revised: 14/10/2019

Version: 5 (Replaced 4)

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier:** Quatrodos Forte**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Relevant uses: Disinfectant . For professional user only.

Uses advised against: All uses not specified in this section or in section 7.3

**1.3 Details of the supplier of the safety data sheet:**

MEDISEPT Sp. z o.o.

Konopnica 159c

21-030 Motycz - lubelskie - Polska

Phone.: +48 81 535 22 92

g.gromadzki@medisept.pl

<https://medisept.pl/>**1.4 Emergency telephone number:** +48 81 535 22 92 at time: 8.00 a.m. – 4.00. p.m.  
112 (general emergency number)**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture:****CLP Regulation (EC) No 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Aquatic Acute 1: Hazardous to the aquatic environment, acute hazard, Category 1, H400

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411

Eye Dam. 1: Serious eye damage, Category 1, H318

Skin Corr. 1B: Skin corrosion, Category 1B, H314

**2.2 Label elements:****CLP Regulation (EC) No 1272/2008:**

Danger

**Hazard statements:**

Aquatic Acute 1: H400 - Very toxic to aquatic life

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage

**Precautionary statements:**

P273: Avoid release to the environment

P280: Wear protective gloves/protective clothing/eye protection/face 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

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively

**Substances that contribute to the classification**

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine; Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate; Alcohol ethoxylated (C9-C11) (6 EO)

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substance:**

Non-applicable

**3.2 Mixture:**



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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

**Chemical description:** Mixture based on cationic and non-ionic surfactants**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 2372-82-9 EC: 219-145-8 Index: Non-applicable REACH: 01-2119980592-29-XXXX	<b>N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine<sup>1</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 3: H301; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Corr. 1B: H314; STOT RE 2: H373 - Danger	2,5 - <10 %
CAS: 94667-33-1 EC: 619-057-3 Index: Non-applicable REACH: 01-2119950327-36-XXXX	<b>Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate<sup>1</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 4: H302; Aquatic Acute 1: H400; Eye Dam. 1: H318; Skin Corr. 1B: H314 - Danger	2,5 - <10 %
CAS: 107-21-1 EC: 203-473-3 Index: 603-027-00-1 REACH: 01-2119456816-28-XXXX	<b>Ethanediol<sup>1</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 4: H302; STOT RE 2: H373 - Warning	1 - <2,5 %
CAS: 68439-46-3 EC: 614-482-0 Index: Non-applicable REACH: 01-2119980051-45-XXXX	<b>Alcohol ethoxylated (C9-C11) (6 EO)<sup>1</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 4: H302; Eye Dam. 1: H318 - Danger	1 - <2,5 %
CAS: 141-43-5 EC: 205-483-3 Index: 603-030-00-8 REACH: 01-2119486455-28-XXXX	<b>2-aminoethanol<sup>2</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 4: H302+H312+H332; Aquatic Chronic 3: H412; Skin Corr. 1B: H314; STOT SE 3: H335 - Danger	<1 %

<sup>1</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830<sup>2</sup> Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

## SECTION 4: FIRST AID MEASURES

**4.1 Description of first aid measures:**

Request medical assistance immediately, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use full jet water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures:**

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

**6.2 Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**6.4 Reference to other sections:**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling:****A.- Precautions for safe manipulation**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

**B.- Technical recommendations for the prevention of fires and explosions**

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

**C.- Technical recommendations to prevent ergonomic and toxicological risks**

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

**D.- Technical recommendations to prevent environmental risks**

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

**7.2 Conditions for safe storage, including any incompatibilities:****A.- Technical measures for storage**

Minimum Temp.: 5 °C

Maximum Temp.: 25 °C



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## SECTION 7: HANDLING AND STORAGE (continued)

Maximum time: 36 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

## 7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace

Identification	Environmental limits		
	IOELV (8h)	20 ppm	52 mg/m <sup>3</sup>
Ethanediol CAS: 107-21-1 EC: 203-473-3	IOELV (STEL)	40 ppm	104 mg/m <sup>3</sup>
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	IOELV (8h)	1 ppm	2.5 mg/m <sup>3</sup>
	IOELV (STEL)	3 ppm	7.6 mg/m <sup>3</sup>

## DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9 EC: 219-145-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,91 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2,35 mg/m <sup>3</sup>	Non-applicable
Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate CAS: 94667-33-1 EC: 619-057-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,7 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,5 mg/m <sup>3</sup>	Non-applicable
Ethanediol CAS: 107-21-1 EC: 203-473-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	106 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	35 mg/m <sup>3</sup>
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	3,3 mg/m <sup>3</sup>

## DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9 EC: 219-145-8	Oral	Non-applicable	Non-applicable	0,2 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,54 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,7 mg/m <sup>3</sup>	Non-applicable
Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate CAS: 94667-33-1 EC: 619-057-3	Oral	Non-applicable	Non-applicable	0,35 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,35 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,12 mg/m <sup>3</sup>	Non-applicable
Ethanediol CAS: 107-21-1 EC: 203-473-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	53 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	7 mg/m <sup>3</sup>
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	Oral	Non-applicable	Non-applicable	3,75 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,24 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	2 mg/m <sup>3</sup>

## PNEC:



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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9 EC: 219-145-8	STP	1,33 mg/L	Fresh water	0,001 mg/L
	Soil	45,34 mg/kg	Marine water	0,0001 mg/L
	Intermittent	0,00015 mg/L	Sediment (Fresh water)	8,5 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,85 mg/kg
Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate CAS: 94667-33-1 EC: 619-057-3	STP	0,118 mg/L	Fresh water	0,001 mg/L
	Soil	2,83 mg/kg	Marine water	Non-applicable
	Intermittent	Non-applicable	Sediment (Fresh water)	5,3 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	STP	100 mg/L	Fresh water	0,085 mg/L
	Soil	0,035 mg/kg	Marine water	0,0085 mg/L
	Intermittent	0,025 mg/L	Sediment (Fresh water)	0,425 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,0425 mg/kg

## 8.2 Exposure controls:

## A.- General security and hygiene measures in the work place



As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

## B.- Respiratory protection



The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

## C.- Specific protection for the hands



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves		EN ISO 374-1:2016 EN 16523-1:2015 EN 420:2003+A1:2009	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

"As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"



## D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		EN 166:2001 EN 167:2001 EN 168:2001 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

## E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks		EN 13034:2005+A1:2009 EN 168:2001 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.

## F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

## Environmental exposure controls:

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	0,84 % weight
V.O.C. density at 20 °C:	8,41 kg/m <sup>3</sup> (8,41 g/L)
Average carbon number:	2,91
Average molecular weight:	71,31 g/mol

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C:	Liquid
Appearance:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	105 °C
Vapour pressure at 20 °C:	2319 Pa
Vapour pressure at 50 °C:	12216,56 Pa (12,22 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	987 - 1007 kg/m <sup>3</sup>
Relative density at 20 °C:	0,998
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	11,05 - 11,8
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Completely miscible
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

**Flammability:**

Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	237 °C
Lower flammability limit:	Non-applicable *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

Upper flammability limit: Non-applicable \*

**Explosive:**

Lower explosive limit: Non-applicable \*

Upper explosive limit: Non-applicable \*

**9.2 Other information:**

Surface tension at 20 °C: Non-applicable \*

Refraction index: 1,35 - 1,354

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**10.5 Incompatible materials:**

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects:**

The experimental information related to the toxicological properties of the product itself is not available

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health .

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
  - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.  
IARC: d-limonene (3); 7-methyl-3-methyleneocta-1,6-diene (2B)
  - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
  - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
  - Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- F- Specific target organ toxicity (STOT) - single exposure:
 

Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.
- G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:
 

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate CAS: 94667-33-1 EC: 619-057-3	LD50 oral	1157 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
Ethanediol CAS: 107-21-1 EC: 203-473-3	LD50 oral	500 mg/kg (ATEi)	
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9 EC: 219-145-8	LD50 oral	261 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
Alcohol ethoxylated (C9-C11) (6 EO) CAS: 68439-46-3 EC: 614-482-0	LD50 oral	500 mg/kg (ATEi)	
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	LD50 oral	500 mg/kg	Rat
	LD50 dermal	1025 mg/kg	Rabbit
	LC50 inhalation	11 mg/L (4 h)	Rat

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**





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## SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Species	Genus
	LC50			
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9 EC: 219-145-8	LC50	0.1 - 1 mg/L (96 h)		Fish
	EC50	0.1 - 1 mg/L		Crustacean
	EC50	0.1 - 1 mg/L		Algae
Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate CAS: 94667-33-1 EC: 619-057-3	LC50	0.52 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	0.07 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	0.15 mg/L (72 h)	Desmodesmus subspicatus	Algae
Ethanediol CAS: 107-21-1 EC: 203-473-3	LC50	53000 mg/L (96 h)	Pimephales promelas	Fish
	EC50	51000 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	24000 mg/L (168 h)	Selenastrum capricornutum	Algae
Alcohol ethoxylated (C9-C11) (6 EO) CAS: 68439-46-3 EC: 614-482-0	LC50	6 mg/L (96 h)	N/A	Fish
	EC50	5.3 mg/L (48 h)	N/A	Crustacean
	EC50	Non-applicable		
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	LC50	349 mg/L (96 h)	Cyprinus carpio	Fish
	EC50	65 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	22 mg/L (72 h)	Scenedesmus subspicatus	Algae

## 12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
Ethanediol CAS: 107-21-1 EC: 203-473-3	BOD5	0.47 g O2/g	Concentration	100 mg/L
	COD	1.29 g O2/g	Period	14 days
	BOD5/COD	0.36	% Biodegradable	90 %
Alcohol ethoxylated (C9-C11) (6 EO) CAS: 68439-46-3 EC: 614-482-0	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	60 %
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	BOD5	Non-applicable	Concentration	20 mg/L
	COD	Non-applicable	Period	21 days
	BOD5/COD	Non-applicable	% Biodegradable	90 %

## 12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate CAS: 94667-33-1 EC: 619-057-3	BCF	81
	Pow Log	
	Potential	Moderate
Ethanediol CAS: 107-21-1 EC: 203-473-3	BCF	10
	Pow Log	-1.36
	Potential	Low
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	BCF	3
	Pow Log	-1.31
	Potential	Low

## 12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate CAS: 94667-33-1 EC: 619-057-3	Koc	437805	Henry	Non-applicable
	Conclusion	Immobile	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
Ethanediol CAS: 107-21-1 EC: 203-473-3	Koc	0	Henry	1,327E-1 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	No
	Surface tension	4,989E-2 N/m (25 °C)	Moist soil	No
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	Koc	0.27	Henry	3,7E-5 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	No
	Surface tension	5,025E-2 N/m (25 °C)	Moist soil	No

## 12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria



**Quatrodos Forte**

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**SECTION 12: ECOLOGICAL INFORMATION (continued)**

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
07 04 04*	other organic solvents, washing liquids and mother liquors	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP14 Ecotoxic, HP8 Corrosive

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

**Transport of dangerous goods by land:**

With regard to ADR 2019 and RID 2019:



- 14.1 UN number:** UN1903
- 14.2 UN proper shipping name:** DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)
- 14.3 Transport hazard class(es):** 8
- Labels:** 8
- 14.4 Packing group:** II
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
  - Special regulations: 274
  - Tunnel restriction code: E
  - Physico-Chemical properties: see section 9
  - Limited quantities: 1 L
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 38-16:



## SECTION 14: TRANSPORT INFORMATION (continued)



<b>14.1 UN number:</b>	UN1903
<b>14.2 UN proper shipping name:</b>	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)
<b>14.3 Transport hazard class(es):</b>	8
Labels:	8
<b>14.4 Packing group:</b>	II
<b>14.5 Environmental hazards:</b>	Yes
<b>14.6 Special precautions for user</b>	
Special regulations:	274
EmS Codes:	F-A, S-B
Physico-Chemical properties:	see section 9
Limited quantities:	1 L
Segregation group:	Non-applicable
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</b>	Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2019:



<b>14.1 UN number:</b>	UN1903
<b>14.2 UN proper shipping name:</b>	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)
<b>14.3 Transport hazard class(es):</b>	8
Labels:	8
<b>14.4 Packing group:</b>	II
<b>14.5 Environmental hazards:</b>	Yes
<b>14.6 Special precautions for user</b>	
Physico-Chemical properties:	see section 9
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</b>	Non-applicable

## SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (Product-type 2, 3, 4, 6, 8, 11, 12, 13) ; Di-decyl-methyl-polyoxyethyl-ammonium-quarternary-propionate (Product-type 2, 4, 8, 10)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Seveso III:**

Section	Description	Lower-tier requirements	Upper-tier requirements
E1		100	200

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Non-applicable

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation

**SECTION 15: REGULATORY INFORMATION (continued)**

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION****Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

Non-applicable

**Texts of the legislative phrases mentioned in section 2:**

H314: Causes severe skin burns and eye damage

H318: Causes serious eye damage

H400: Very toxic to aquatic life

H411: Toxic to aquatic life with long lasting effects

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) No 1272/2008:**

Acute Tox. 3: H301 - Toxic if swallowed

Acute Tox. 4: H302 - Harmful if swallowed

Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled

Aquatic Acute 1: H400 - Very toxic to aquatic life

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects

Eye Dam. 1: H318 - Causes serious eye damage

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral)

STOT SE 3: H335 - May cause respiratory irritation

**Classification procedure:**

Skin Corr. 1B: Calculation method

Eye Dam. 1: Calculation method

Aquatic Acute 1: Calculation method

Aquatic Chronic 2: Calculation method

**Advice related to training:**

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.