



aqua-terra Bioprodukt GmbH			
Material Safety Data Sheet 2001/58 EG-5/2.4			
Name of product:	RenoSan[®] „RenoSan 444“		
Printed on:	12.11.2007	Reviewed on:	01.04.2003
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1.	Identification of substance and details on manufacturer	
1.1.	Information on product or mixture:	
1.1.1.	Trade name:	RenoSan[®] “RenoSan 444”
1.2.	Application field of product or mixture:	Sanitary product
1.3.	Data on company / Manufacturer	
1.3.1.	Manufacturer:	aqua-terra Bioprodukt GmbH
	Street / POB:	Langenselbolder Str. 8
	Postal code / City:	D-63543 Neuberg
	Telephone:	+49 (0)6183 / 91 49 00
	Fax:	+49 (0)6183 / 91 49 049
1.4.	Emergency call:	+49 (0)800-0900 999

2.	Composition / Data on components	
2.1.	Chem. Characterisation:	Sodium alginate / natural etheric oils
2.1.1	Description	Sodium Alginate / natural etheric oils
2.1.2	Hazardous components	CAS-No. %-area label. R-cases
	Glutaral, EINECS: 203-856-3	111-30-8 9,9 T, N R23/25-34-42/43-50
2.1.3	Identification no.	EINECS: 203-856-6 R-Phrases
2.2.	Additional information	Given information of mentioned R-Phrases correspond to no. 16.

3.	Possible dangers	
3.1.	Hazardous labelling	Xn injurious to health.
3.2.	Information pertaining to particular dangers for man and environment:	R20/22 R37/38 R41 R42/43
3.3.	Classification system	Classification of the product with regard to injurious properties to health and environment correspond to conventional methods as described in annex II and III



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of "Zubereitungsrichtlinien" (1999/45/EG).

4.	First aid measures	
4.1.	General information	Self-protection of first aid.
4.1.1.	After inhalation	Ensure supply with fresh-air, consult doctor on complaints. Take out of dangered zone. On symptoms of irritation or sensibilization (e.g. short of breath, cough) consult doctor.
4.1.2.	After skin contact	Put away clothes polluted with product. Immediately wash with water and soap, rinse well. On stagnant irritation of skin consult doctor. Should large parts of skin be polluted with product, immediately shower..
4.1.3.	After eye contact	Rinse open eye at least 15 minutes (flowing water), put on sterile protecting bandage. Consult eye-doctor
4.1.4.	After swallowing	Rinse mouth, drink sufficiently water. Do not force vomiting. Take up medical coal (3 table-spoons in a glass of water).
4.2.	Additional medical advice	The following symptoms might appear: Allergical irritations. Treatment: Rinse eyes with physiological salt solution. For ache treatment take Chibro-Kerakain drops.

5.	Fire fighting measures	
5.1.	Suitable extinguishing agents	Water spraying stream, extinguishing powder, CO ₂ , foam.
5.2.	For safety reasons unsuitable extinguishing agents	None.
5.3.	Special dangers due to product, its combustion or gases	In case of fire, toxic combustion might release (e.g. NO _x , CO).
5.4.	Special protective equipment:	Put on breathing protection equipment.



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6.	Accidental release measures	
6.1.	Person-related safety precautions:	Put on protection equipment. Take away persons without protection. When choosing protection equipment ensure that complete and safe protection of skin and mucous membrane is granted. We recommend non-permeable protection clothes, protection boots (neoprene), complete face protection, nitril rubber gloves with long cuffs.
6.2.	Measures for environmental protection:	Stop areal extension (e.g. strew out a ring of chemical binding material).
6.3.	Measures for cleaning/collecting:	Larger parts of residues should be collected in pails. Strew absorbent material on eventually occurring residues, mix and sweep away avoiding dust. Suitable binding material: binding material for many purposes, labelled V. Polluted material to be removed according to 13. Ensure sufficient fresh air.
6.4.	Additional information:	None.

7.	Handling and storage	
7.1.	Handling:	
7.1.1.	Information on safe handling:	Ensure good aeration on working place. Wherever possible, only fill and handle product in closed systems. Avoidance of spilling or spraying.
7.1.2.	Information on protection against explosions and fires:	No special requirements.
7.2.	Storage:	
7.2.1.	Properties of stores and containers:	No special requirements.
7.2.2.	Hints for storage with other	



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	material:	Do not store together with food.
7.2.3.	Additional information on storage conditions:	Containers should be closed tightly.
7.2.4.	Classification of storage (acc. to VCI):	LGK 10: Burnable liquids, if not belonging to LGK 3A or LGK 3B (properties of packaging to burn are already considered).

8.	Exposure controls and personal protection	
8.1.	Additional information on equipment of technical plants:	No further information, see no. 7.
8.2.	Exposure limit values and monitoring at workplace:	111-30-8 glutural MAK (Germany): 0,42 mg/m ³ , 0,1 ml/m ³ Y; DFG
8.3.	Personal protection equipment:	
8.3.1.	Inhalation protection:	Not necessary when good aeration is granted.
8.3.2.	Handling protection:	Use chemical resistant gloves (CE-labelling Kat. III). Unsuitable gloves: leather.
8.3.3.	Eye protection:	Use goggles.
8.3.4.	Body protection:	Protection suit.
8.3.5.	General protection and hygiene regulations:	As precaution, use skin protecting balm. Avoid contact with eyes and skin. Wash hands when ending work or making pauses.

9.	Physical and chemical properties	
9.1.	Appearance:	
9.1.1.	Form:	Paste.
9.1.2.	Colour:	According to product specification.
9.1.3.	Odour:	Fruit-likely.



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9.2.	Security data	
9.2.1.	pH value (20°C):	6,8 – 7,5
9.2.2.	pH at 100 g/l (20°C):	
9.2.3.	Alterations of product:	
9.2.3.1.	Melting temperature:	Not specified.
9.2.3.2.	Boiling point / area:	100°C
9.2.3.3.	Flash point:	Not applicable.
9.2.3.4.	Flashing temperature:	
9.2.3.5.	Ability for self-flamability:	Product is not self-flamable.
9.2.3.6.	Properties promoting flammability:	
9.2.4.	Danger of explosion:	Product is not endangered to explode.
9.2.4.1.	Vapour pressure (20°C) [mbar]:	
9.2.4.2.	Density (20°C):	app. 1,01 g/m ³
9.2.5.	Solubility in water:	Completely soluble.
9.2.6.	Mixing properties with water:	Completely mixable.
9.2.7.	Dynamic viscosity:	

10.	Stability and reactivity	
10.1.	Thermic decomposition:	
10.2.	Conditions to be avoided:	No decomposition when handling according to these data.
10.3.	Hazardous reactions:	None, according to our knowledge.
10.4.	Dangerous decomposition products:	None, when properly stored and handled.

11.	Toxicological information	
11.1.	Acute toxicological data LD/LC40 values relevant for labelling:	
		111-30-8 Glutaral
	- oral	LD50 320 mg/kg (rat)
	- dermal	LD50 >2000 mg/kg (rat)
	- inhalative	LC50/4h 0,3 mg/l (rat)
11.1.2.	Specific symptoms in animal tests:	
11.1.3.	Irritating / caustic effects:	



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11.1.3.1. Eyes:	Heavily caustic with danger of damages to eyes.
11.1.3.2. Skin:	Irritating skin and mucous membranes.
11.1.4. Sensitization:	Possible sensitization on inhalation. Possible sensitization on contact with skin.
11.1.5. Effects due to repeated long-term expositon:	
11.1.6. Practical experiences:	
11.1.7. Additional information:	

12. Ecological information	
12.1. Biological decomposition:	Product ingredients can easily be catabolised biologically.
12.2. Elimination:	
12.3. Additional information: Ecological toxicologicals:	Aquatic toxicology: 111-30-8 Glutaral EC50 / 2,87 mg/l (Senastrum capricornutum) EC50 / 16 h 104 mg/l (Bakterien) EC50 / 17 h 13,3 mg/l (Pseudomonas putida) EC50 / 48 h 30 mg/l (Daphnie) IC50 > 208 mg/l (Belebtschlammorganismen) IC50 72 h 0,84 mg/l (Scenedesmus subspicatus) LC50 46 mg/l (Blauer Sonnenbarsch) 46 mb/l (Regenbogenforelle) Considering our information on handling this product, no disturbances of catabolism activity of organisms within activated sludge are to be expected.
12.4. Additional information:	
12.5.1. Water hazard class:	
12.5.2. Information on AOX:	Based to recipe, product does not contain substances negatively effecting AOX-value of sewagewater.
12.5.3. Content of heavy metal:	Does not contain heavy metal.
12.5.4. COD [mg O₂/g product]:	
12.5.5. BOD:	



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13.	Disposal recommendations	
13.1.	No. of waste code (EAK):	Recommendation: According to regulations for special waste, product has to be disposed to an incinerator for special waste after pre-treatment. European Codes for waste: 16 00 00 16 03 00 16 03 05
13.2.	Uncleaned packagings:	
13.3.	Recommended solvents:	Water, also adding cleaning agents.
13.4.	Recommendation:	Completely pour out polluted packagings. Packagings can be re-used after cleaning process.

14.	Transport information	
14.1.	Land transport (GGVSE)	
14.1.1.	GGVSE-class:	
14.1.2.	Labelling of product:	
14.1.3.	UN-No. for labelling of material:	
14.2.	Additional information on transport:	Non-hazardous material according to mentioned regulations.

15.	Regulations	
15.1.	Labelling according to EC regulations (67/548EWG and 1999/45/EG):	Product is classified and labelled according to EU-regulations.
15.1.1.	Labelling:	Duty to labelling.
15.1.2.	Code letter and hazard classification of product:	Xn injurious to health.
15.1.3.	Hazardous components to be mentioned on label:	Glutaral
15.1.4.	R-Phrases:	20/22 harmful by inhalation and if swallowed. 37/38 Irritating to respiratory system and skin.



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15.1.5. S-Phrases:	<p>41 Risk of serious damage to eyes.</p> <p>42/43 May cause sensitization by inhalation and skin contact.</p> <hr/> <p>24 Avoid contact with skin.</p> <p>26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</p> <p>37/39 Wear suitable gloves and eye/face protection.</p> <p>45 In case of accident or if you feel unwell, seek medical advice immediately. (Show label where possible).</p> <p>60 This material and its container must be disposed of as hazardous waste.</p>
15.1.6. Labelling and concentration of biocide ingredients according to art. 20, regulation 98/8/EG:	<p>Glutaral: 99,0 g/kg</p>
15.2. National regulations	
Regulations on disturbances:	<p>Regulations on disturbances (12. BImSchV), annex I, list: not listed.</p>
Classification according to Betr.SichV:	<p>--</p>
Technical advice on air purity dt. 24.07.02:	<p>Class: I</p> <p>Degree in %: 9,9</p>
15.2.1. Information on restrictions for employees:	
15.2.2. VOC content:	
15.2.3. Water hazard class:	<p>WGK 3 (estimated): heavily hazardous to water. Classification of water hazard classes according to annex 4, no. 3 of VwVwS dt. 17.05.99. (Classification of water hazard class based on components).</p>
15.2.4. Classification acc. to VbF:	<p>None, as not burnable.</p>
15.2.5. Additional regulations, restrictions and prohibitions:	<p>BG-Merkblatt:</p>



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M 053 "Arbeitsschutzmaßnahmen für den Umgang mit
Gefahrstoffen" (BGI 660)
A 008 "Persönliche Schutzausrüstung"
M 042 "Hautschutz"
T 025 "Umfüllen von Flüssigkeiten"
M 004 "Reizende Stoffe - Ätzende Stoffe" (BGI 595)
A 016 "Gefährdungsbeurteilung- Warum? Wer? Wie?"

16. Other information

Given 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.

R-Phrases of hazardous ingredients:

- 23/25** Toxic by inhalation and if swallowed.
- 34** Causes burns.
- 42/43** May cause sensitization by inhalation and skin contact.
- 50** Very toxic to aquatic organisms.

Information on training

Additional information on practical handling can be taken from this sheet.

For handling this product, please observe to working-place regulation acc. to § 14 of Gefahrstoffverordnung (hazardous material regulations) dt. 23.1.2004.

Capable for information given in this data sheet:

Product security.

Mr. P. Sprau