according to Regulation (EC) No. 1907/2006



grotan® OK plus No Change Service!

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

## 1.1 Product identifier

Trade name : grotan® OK plus

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

Use of the Sub- : Preservative

stance/Mixture

# 1.3 Details of the supplier of the safety data sheet

Producer/Supplier : Schülke & Mayr GmbH

Robert-Koch-Str. 2 22851 Norderstedt

Germany

Telephone: +4940521000 Telefax: +494052100318 mail@schuelke.com www.schuelke.com

Contact person : SAI/AT +49 40 52100 100 or S&M UK +44 114 254 3500

sai-at@schuelke.com

: UK Poisons Emergency number: 0870 600 6266

# 1.4 Emergency telephone number

Emergency telephone num-

oer

: +49 (0)40 / 52 100 -0

Emergency telephone number

# **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

# Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed.

Skin corrosion, Sub-category 1C H314: Causes severe skin burns and eye damage.

Acute toxicity, Category 4 H332: Harmful if inhaled.

Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.

Chronic aquatic toxicity, Category 2 H411: Toxic to aquatic life with long lasting effects.

# Classification (67/548/EEC, 1999/45/EC)

Corrosive R20/22: Harmful by inhalation and if swallowed.

Dangerous for the environment R34: Causes burns.

R50: Very toxic to aquatic organisms.

## 2.2 Label elements

Labelling

according to Regulation (EC) No. 1907/2006



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Hazard pictograms







Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled

H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting

effects.

Supplemental Hazard

Statements

EUH070

Toxic by eye contact.

Precautionary statements : P260 Do not breathe dust/ fume/ gas/ mist/ va-

pours/ spray.

P273 Avoid release to the environment.

P280 Wear protective gloves (e.g. butyl rubber)

/protective clothing/eye protection/face pro-

tection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT

induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/ Take off

immediately all contaminated clothing.

Rinse skin with water/ 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 or

doctor/physician.

Hazardous components which must be listed on the label:

66204-44-2 3,3'-Methylenebis[5-methyloxazolidine]

Special labelling of certain

mixtures

: Use biocides safely. Always read the label and product infor-

mation before use.

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

# **SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

Chemical nature : Solution of the following substances with harmless additives.

#### **Hazardous components**

Chemical Name	Index-Number	Classification	Classification	Concentration
	CAS-No.	(67/548/EEC)	(REGULATION	(%)
	EC-No.		(EC) No	` ,
	Registration		1272/2008)	

according to Regulation (EC) No. 1907/2006



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	number			
3,3'-Methylenebis[5-methyloxazolidine]	66204-44-2 266-235-8	Xn; R20/22 C; R34 R52	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Corr. 1C; H314	80 - 90 %
Ethylene glycol	603-027-00-1 107-21-1 203-473-3 01- 2119456816- 28-XXXX	Xn; R22	Acute Tox. 4; H302 STOT RE 2; H373	5 - 10 %
Pyridine-2-thiol-1-oxide, sodium salt	3811-73-2 223-296-5	Xn; R20/21/22 Xi; R36/38 N; R50	Acute Tox. 4; H302 Acute Tox. 4; H312 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH070	1 - 2 %

For explanation of abbreviations see section 16.

## **SECTION 4: First aid measures**

# 4.1 Description of first aid measures

General advice : Take off all contaminated clothing immediately.

If inhaled If symptoms persist, call a physician. : Wash off immediately with plenty of water. In case of skin contact

: In the case of contact with eyes, rinse immediately with plenty In case of eye contact

of water and seek medical advice.

: Do NOT induce vomiting. Rinse mouth with water. Give small If swallowed

amounts of water to drink. Obtain medical attention.

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

**Symptoms** : No information available.

Risks : No information available.

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

Treatment : No information available.

# **SECTION 5: Firefighting measures**

# 5.1 Extinguishing media

Suitable extinguishing media : Water, Dry powder, Foam, Carbon dioxide (CO2)

Unsuitable extinguishing

media

: No information available.

according to Regulation (EC) No. 1907/2006



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5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

: No information available.

Specific risk from the substance or the product itself.

its combustion products or

evolved gases

: Decomposition products, see chapter 10

5.3 Advice for firefighters

Further information : Standard procedure for chemical fires.

**SECTION 6: Accidental release measures** 

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ensure adequate ventilation. Use personal protective equip-

ment.

6.2 Environmental precautions

**Environmental precautions** : Do not flush into surface water or sanitary sewer system.

Avoid subsoil penetration.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).

Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

6.4 Reference to other sections

see Section 8 + 13

**SECTION 7: Handling and storage** 

7.1 Precautions for safe handling

Advice on safe handling : Use only in well-ventilated areas. Handle and open container

with care.

Advice on protection against

fire and explosion

: No special protective measures against fire required.

Hygiene measures : Take off all contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage

areas and containers

: Store in original container.

Further information on stor-

age conditions

: Keep away from heat. Keep away from direct sunlight. Keep

container tightly closed. Limited stability - see label on pack.

Advice on common storage : Keep away from food and drink.

7.3 Specific end use(s)

Specific use(s) : none according to Regulation (EC) No. 1907/2006



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# **SECTION 8: Exposure controls/personal protection**

# 8.1 Control parameters

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Formaldehyde	50-00-0	Permissible exposure limit	0,3 ppm 0,37 mg/m3	TRGS 900
Formaldehyde	50-00-0	Ceiling Limit Value	0,6 ppm 0,74 mg/m3	TRGS 900
Formaldehyde	50-00-0	Permissible exposure limit	0,75 ppm	OSHA
Formaldehyde	50-00-0	Short term exposure limit	2 ppm	OSHA
Ethylene glycol	107-21-1	Permissible exposure limit	20 ppm 52 mg/m3	EC/2000/39
Ethylene glycol	107-21-1	Short term exposure limit	40 ppm 104 mg/m3	EC/2000/39
Pyridine-2-thiol-1- oxide, sodium salt	3811-73-2	Permissible exposure limit	1 mg/m3	TRGS 900
Pyridine-2-thiol-1- oxide, sodium salt	3811-73-2	Ceiling Limit Value	2 mg/m3	TRGS 900

Hazardous decomposition products

# Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Ethylene glycol

: End Use: Workers, Exposure routes: Skin contact, Potential health effects: Long-term systemic effects, Value: 106 mg/kg End Use: Workers, Exposure routes: Inhalation, Potential health

effects: Long-term local effects, Value: 35 mg/m3

End Use: Consumers, Exposure routes: Inhalation, Potential health effects: Long-term local effects, Value: 7 mg/m3

End Use: Consumers, Exposure routes: Skin contact, Potential health effects: Long-term systemic effects, Value: 53 mg/kg

# Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Ethylene glycol : Fresh water, Value: 10 mg/l

Marine water, Value: 1 mg/l

Fresh water sediment, Value: 20,9 mg/kg

Effects on waste water treatment plants, Value: 199,5 mg/l

Soil, Value: 1,53 mg/kg

Intermittent use/release, Value: 10 mg/kg

# 8.2 Exposure controls

#### Personal protective equipment

Eye protection : Tightly fitting safety goggles

Hand protection : Impervious gloves Splash protection: disposable nitrile rubber

gloves e.g. Dermatril (layer thickness: 0,11 mm) made by KCL or gloves from other manufacturers offering the same protection. Prolonged contact: Butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0,70 mm) made by KCL or gloves

from other manufacturers offering the same protection.

Protective measures : Avoid contact with skin and eyes.

according to Regulation (EC) No. 1907/2006



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#### **Environmental exposure controls**

General advice : Do not flush into surface water or sanitary sewer system.

Avoid subsoil penetration.

# **SECTION 9: Physical and chemical properties**

# 9.1 Information on basic physical and chemical properties

Appearance Liquid

Colour light yellow - pale red-brown

Odour : amine-like Odour Threshold : not determined
Flash point : > 100 °C, ISO 2719
Ignition temperature : Not applicable
Auto-ignition temperature : not auto-flammable
Lower explosion limit : Not applicable
Upper explosion limit : Not applicable
Flammability : not auto-flammable Odour Threshold Flammability : not auto-flammable
Explosive properties : Not explosive
Oxidizing properties : Not applicable
pH : 10 - 11, Concentration: 10,00 g/l, 20 °C, in water
Freezing point : < -18 °C

Boiling point : > 100 °C : not auto-flammable

Freezing point : > 100 °C. Boiling point Vapour pressure Relative vapour density Boiling point : not determined. : not determined

Density : 1,080 - 1,120 g/ml, 20 °C Water solubility : in all proportions, 20 °C

Partition coefficient: n-: Not applicable

octanol/water

Viscosity, dynamic : 996 mPa\*s, 20 °C, Rheo WIN RS 600,

: ca. 180 s at 20 °C, DIN 53211 Flow time

: not determined Evaporation rate

9.2 Other information

: 27 mN/m Surface tension

Refractive index : 1,480 - 1,492, 20 °C

# **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Stable under recommended storage conditions.

#### 10.2 Chemical stability

No decomposition if stored normally.

# 10.3 Possibility of hazardous reactions

reaction with acids

### 10.4 Conditions to avoid

No data available

according to Regulation (EC) No. 1907/2006



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# 10.5 Incompatible materials

Acids

# 10.6 Hazardous decomposition products

formaldehyde

# **SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

# **Acute toxicity**

# **Components:**

# 3,3'-Methylenebis[5-methyloxazolidine]:

Acute oral toxicity : LD50: 900 mg/kg, Rat

Acute inhalation toxicity : LC50: 2 mg/l, 4 h, Rat, dust/mist, OECD Test Guideline 436,

GLP: yes

Acute dermal toxicity : LD50: 1207 - 1620 mg/kg, Rat, OECD Test Guideline 402,

not applicable, corrosive substance. According Guidline OECD 402 a non- corrosive concentration has to be tested

Ethylene glycol:

Acute oral toxicity : LDLo: 1600 mg/kg, Humans Acute inhalation toxicity : LC50: 2,5 mg/l, 6 h, Rat : LD50: 3500 mg/kg, Mouse

Pyridine-2-thiol-1-oxide, sodium salt:

Acute oral toxicity : LD50 Oral: 1208 mg/kg, Rat

Acute inhalation toxicity : LC50: 1,08 mg/l, Rat

Acute dermal toxicity : LD50 Dermal: 1800 mg/kg, Rabbit

## Skin corrosion/irritation

#### **Components:**

#### 3.3'-Methylenebis[5-methyloxazolidine]:

Severe skin irritation, Rabbit, concentrate

Ethylene glycol: No skin irritation. Rabbit

Pyridine-2-thiol-1-oxide, sodium salt:

Irritating to skin.

# Serious eye damage/eye irritation

# **Components:**

# 3,3'-Methylenebis[5-methyloxazolidine]:

Risk of serious damage to eyes., Rabbit, concentrate

Ethylene glycol:

No eye irritation, Rabbit

# Pyridine-2-thiol-1-oxide, sodium salt:

Irritating to eyes.

# Respiratory or skin sensitisation

#### Components:

## 3,3'-Methylenebis[5-methyloxazolidine]:

Did not cause sensitisation on laboratory animals. Guinea pig, OECD Test Guideline 406

# Ethylene glycol:

Patch test on human volunteers did not demonstrate sensitisation properties.

# Pyridine-2-thiol-1-oxide, sodium salt:

Does not cause skin sensitisation.

according to Regulation (EC) No. 1907/2006



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# Germ cell mutagenicity

## Components:

3,3'-Methylenebis[5-methyloxazolidine]:

Genotoxicity in vitro : Not mutagenic in Ames Test OECD 471

Genotoxicity in vivo : Did not show mutagenic effects in animal experiments., Muta-

genicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis), Mouse, OECD Test Guideline, 475

Ethylene glycol:

Germ cell mutagenicity- As-

: In vivo tests did not show mutagenic effects

sessment

Pyridine-2-thiol-1-oxide, sodium salt:

Germ cell mutagenicity- As- : No data available

sessment

# Carcinogenicity

# **Components:**

Ethylene glycol:

Carcinogenicity - Assess- : Animal testing did not show any carcinogenic effects.

ment

Pyridine-2-thiol-1-oxide, sodium salt:

Carcinogenicity - Assess- : No data available

ment

# Reproductive toxicity

#### **Components:**

Ethylene glycol:

Reproductive toxicity - As- : Animal testing did not show any effects on fertility.

sessment

Teratogenicity - Assessment : Ingestion of excessive amounts by pregnant animals resulted

in maternal and foetal toxicity.

Pyridine-2-thiol-1-oxide, sodium salt:

Reproductive toxicity - As- : No data available

sessment

Teratogenicity - Assessment : No data available

#### STOT - single exposure

# **Components:**

# Ethylene glycol:

The substance or mixture is not classified as specific target organ toxicant, single exposure.

# STOT - repeated exposure

## **Components:**

#### Ethylene glycol:

Ingestion, Kidney, May cause damage to organs through prolonged or repeated exposure.

## Repeated dose toxicity

### Components:

# 3,3'-Methylenebis[5-methyloxazolidine]:

Rat: NOAEL: 72 mg/kg, Repeated dose (90 days) toxicity (oral), OECD Test Guideline, 408

# **Aspiration toxicity**

No data available

according to Regulation (EC) No. 1907/2006



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# **SECTION 12: Ecological information**

# 12.1 Toxicity

Components:

3.3'-Methylenebis[5-methyloxazolidine]:

Toxicity to fish : LC50 (Brachidanio rerio): 57,7 mg/l Toxicity to daphnia and other : EC50 (Daphnia magna): 37,9 mg/l, 48 h

aquatic invertebrates

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 5,7 mg/l,

Toxicity to bacteria : EC50: 44 mg/l, OECD 209

Ethylene glycol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 72.860 mg/l.

Toxicity to daphnia and other

aquatic invertebrates

Toxicity to algae

: EC50 (Selenastrum capricornutum (green algae)): 6.500 -

: EC50 (Daphnia magna): > 100 mg/l, 48 h

13.000 mg/l, 96 h

Toxicity to fish (Chronic tox-

icity)

: NOEC (Pimephales promelas (fathead minnow)): 15.380 mg/l,

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

: EC20 (activated sludge): >1.995 mg/l, 0,5 h, ISO 8192

: NOEC (Ceriodaphnia dubia (water flea)): 8.590 mg/l, 7 d

Pyridine-2-thiol-1-oxide, sodium salt:

Toxicity to fish Toxicity to daphnia and other

Toxicity to bacteria

: LC50 (Oncorhynchus mykiss): 0,0066 mg/l, 96 h : EC50 (Daphnia magna (Water flea)): 0,022 mg/l, 48 h

aquatic invertebrates : EC50 (Scenedesmus capricornutum (fresh water algae)): 0,46 Toxicity to algae

mg/l

: 10

M-Factor (Acute aquatic tox-

M-Factor (Chronic aquatic

toxicity)

: 100

# 12.2 Persistence and degradability

**Product** 

Biodegradability : According to the results of tests of biodegradability this prod-

uct is considered as being readily biodegradable. 100 o/o,

OECD Test Guideline 301D

Components:

3,3'-Methylenebis[5-methyloxazolidine]:

Biodegradability : biodegradable OECD 301D / EEC 84/449 C6

Ethylene glycol:

Biodegradability : Readily biodegradable 90 - 100 o/o, 10 d, OECD Test Guide-

line 301A

Pyridine-2-thiol-1-oxide, sodium salt:

Biodegradability : rapidly biodegradable

12.3 Bioaccumulative potential

**Product** 

Partition coefficient: n-: Not applicable

octanol/water

according to Regulation (EC) No. 1907/2006



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**Components:** 

3,3'-Methylenebis[5-methyloxazolidine]:
Partition coefficient: n- : log Pow: -0.3

octanol/water

Ethylene glycol:

Bioaccumulation : No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n- : log Pow: -1,36 (23 °C)

octanol/water

Pyridine-2-thiol-1-oxide, sodium salt:

Partition coefficient: n- : log Pow: -3,8

octanol/water

12.4 Mobility in soil

**Product** 

Mobility : No data available

12.5 Results of PBT and vPvB assessment

**Product** 

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

**Product** 

Adsorbed organic bound

halogens (AOX)

: Product does not contain any organic halogens.

**SECTION 13: Disposal considerations** 

13.1 Waste treatment methods

Product : Dispose of as special waste in compliance with local and na-

tional regulations.

Can be disposed of as a solid waste or burned in a suitable

installation subject to local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

Waste key for the unused

product(Group)

: The waste producer itself must, in consultation with the appropriate authorities and a waste disposal company, obtain a

waste code from the EWC (European Waste Catalogue)

**SECTION 14: Transport information** 

14.1 UN number

ADR : UN 2735 IMDG : UN 2735 IATA : UN 2735

14.2 UN proper shipping name

according to Regulation (EC) No. 1907/2006



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**ADR** : AMINES, LIQUID, CORROSIVE, N.O.S.

(3,3'-Methylenebis[5-methyloxazolidine], Pyridine-2-thiol-1-

oxide, sodium salt)

: AMINES, LIQUID, CORROSIVE, N.O.S. **IMDG** 

(3,3'-Methylenebis[5-methyloxazolidine], Pyridine-2-thiol-1-

oxide, sodium salt)

IATA : Amines, liquid, corrosive, n.o.s.

(3,3'-Methylenebis[5-methyloxazolidine], Pyridine-2-thiol-1-

oxide, sodium salt)

14.3 Transport hazard class(es)

**ADR** : 8 **IMDG** : 8 **IATA** : 8

14.4 Packing group

ADR

Packing group : 111 Classification Code : C7 Hazard Identification Number : 80 Labels : 8 + (N)Tunnel restriction code : Ε

**IMDG** 

Packing group : 111 Labels : 8 + (N)EmS Code : F-A, S-B

IATA

Packing instruction (cargo : 856

aircraft)

Packing group : 111 Labels : 8 + (N)

14.5 Environmental hazards

**ADR** 

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

14.6 Special precautions for user

For personal protection see section 8.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

according to Regulation (EC) No. 1907/2006



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# **SECTION 15: Regulatory information**

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

Legislation on the control of major-accident hazards involving dangerous substanc-

: The product belongs to at least one of the categories 1 through 11 mentioned in Annex 1 of the Directive 1996/82/EC concerning the control of major assistant because

ing the control of major accident hazards.

Volatile organic compounds

: 9,4 %, Directive 2010/75/EU on the limitation of emissions of

volatile organic compounds

## 15.2 Chemical Safety Assessment

Not applicable

#### **SECTION 16: Other information**

#### **Full text of R-Phrases**

R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed.

R20/22 : Harmful by inhalation and if swallowed.

R22 : Harmful if swallowed.

R34 : Causes burns.

R36/38 : Irritating to eyes and skin.
R50 : Very toxic to aquatic organisms.
R52 : Harmful to aquatic organisms.

**Full text of H-Statements** 

EUH070 : Toxic by eye contact. H302 : Harmful if swallowed.

H312 : Harmful in contact with skin.

H314 : Causes severe skin burns and eye damage.

H315 : Causes skin irritation.

H319 : Causes serious eye irritation.

H332 : Harmful if inhaled.

H373 : May cause damage to organs through prolonged or repeated

exposure if swallowed.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

# Full text of other abbreviations

Acute Tox. Acute toxicity

Aquatic Acute Acute aquatic toxicity
Aquatic Chronic Chronic aquatic toxicity

Eye Irrit. Eye irritation
Skin Corr. Skin corrosion
Skin Irrit. Skin irritation

STOT RE Specific target organ toxicity - repeated exposure

#### **Further information**

Changes compared with the previous edition!!!

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a

according to Regulation (EC) No. 1907/2006



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