

24547-1019

Safety data sheet in accordance with regulation (EC) No 1907/2006



Trade name: Marabu Aqua Pen MaKeManga Schwarz

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-01

Replaces Version: 1 / GB

Print date: 17.03.17

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

### **1.1. Product identifier**

Marabu Aqua Pen MaKeManga Schwarz

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

#### **Use of the substance/preparation**

Paint

#### **Identified Uses**

SU21

PC9a

Consumer uses: Private households (= general public = consumers)  
Coatings and paints, thinners, paint removers

### **1.3. Details of the supplier of the safety data sheet**

#### **Address**

Marabu GmbH &amp; Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Fax no.

+49-7141/691-147

Information provided  
by / telephone

Department product safety

E-mail address of  
person responsible  
for this SDS

PRSI@marabu.de

### **1.4. Emergency telephone number**

(+49) (0)621-60-43333

## **SECTION 2: Hazards identification \*\*\***

### **2.1. Classification of the substance or mixture**

This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

#### **Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

EUH208 Contains

A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and  
2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1), May  
produce an allergic reaction.

#### **Supplemental information**

#### **Labelling according to regulation (EU) No 528/2012 \*\*\***

Contains a biocidal product: A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and  
2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**Chemical characterization**

Paint based on water

**Hazardous ingredients****Ethanediol**

CAS No.	107-21-1				
EINECS no.	203-473-3				
Registration no.	01-2119456816-28				
Concentration	>= 1	<	10	%	

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

**Bronopol (INN)**

CAS No.	52-51-7				
EINECS no.	200-143-0				
Concentration	>= 0,01	<	0,1	%	

Classification (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318
Skin Irrit. 2	H315
STOT SE 3	H335
Acute Tox. 4	H302
Acute Tox. 4	H312
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	H400	M = 10
Aquatic Chronic 1	H410	M = 1

**A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**

CAS No.	55965-84-9				
Concentration		<	0,0015	%	

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 3	H331
Aquatic Chronic 1	H410
Aquatic Acute 1	H400
Skin Sens. 1	H317
Skin Corr. 1B	H314
Acute Tox. 3	H311
Acute Tox. 3	H301

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	>= 0,6
Eye Irrit. 2	H319	<= 0,06 < 0,6
Skin Irrit. 2	H315	<= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015

**Further ingredients \*\*\*****Glycerol**

CAS No.	56-81-5				
EINECS no.	200-289-5				
Concentration	>= 10	<	25	%	[3]

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[3] Substance with occupational exposure limits**SECTION 4: First aid measures****4.1. Description of first aid measures****After skin contact**

Wash with plenty of water and soap. Do NOT use solvents or thinners.

**After eye contact**

Separate eyelids, wash the eyes thoroughly with water (15 min.). In case of irritation consult an oculist.

**After ingestion**

Rinse mouth thoroughly with water. If larger amounts are swallowed or in the event of symptoms take medical treatment.

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

Until now no symptoms known so far.

**4.3. Indication of any immediate medical attention and special treatment needed****Hints for the physician / treatment**

Treat symptomatically

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Foam, Sand, Water

**5.2. Special hazards arising from the substance or mixture**In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); dense black smoke**5.3. Advice for firefighters****Other information**

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

No particular measures required.

**6.2. Environmental precautions**

No particular measures required.

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

Clean preferably with a detergent - avoid use of solvents.

**6.4. Reference to other sections**

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

**SECTION 7: Handling and storage**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**7.1. Precautions for safe handling****Advice on safe handling**

Avoid skin and eye contact. Smoking, eating and drinking shall be prohibited in application area.

**Advice on protection against fire and explosion**

No special measures required.

**Classification of fires / temperature class / Ignition group / Dust explosion class**

Temperature class T2

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Store in frostfree conditions.

**Storage class according to TRGS 510**Storage class according to 12 Non-combustible liquids  
TRGS 510**7.3. Specific end use(s)**

Paint

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limit values****Ethanediol**

List	EH40
Type	WEL
Value	10 mg/m <sup>3</sup>
Skin resorption / sensibilisation: Sk; Status: 2011	

**Glycerol**

List	EH40
Type	WEL
Value	10 mg/m <sup>3</sup>
Status: 2011	

**Other information**

There are not known any further control parameters.

**Derived No/Minimal Effect Levels (DNEL/DMEL)****Ethanediol**

Type of value	Derived No Effect Level (DNEL)
Reference group	Worker
Duration of exposure	Long term
Route of exposure	inhalative
Mode of action	Local effects
Concentration	35 mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)
Reference group	Worker
Duration of exposure	Long term
Route of exposure	dermal
Mode of action	Systemic effects
Concentration	106 mg/kg

Type of value	Derived No Effect Level (DNEL)
Reference group	Consumer

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Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	7	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	53	mg/kg

**Predicted No Effect Concentration (PNEC)****Ethanediol**

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l

Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	10	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	199,5	mg/l

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	37	mg/kg

Type of value	PNEC	
Type	Marine sediment	
Concentration	3,7	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	1,53	mg/kg

**8.2. Exposure controls****Exposure controls**

Provide adequate ventilation.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Form	liquid
Colour	coloured
Odour	odourless

**Odour threshold**

Remarks	No data available
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**Melting point**

Remarks not determined

**Freezing point**

Remarks not determined

**Initial boiling point and boiling range**

Value appr. 100 °C

Pressure 1.013 hPa

Source Literature value

**Flash point**

Remarks Not applicable

**Evaporation rate (ether = 1) :**

Remarks not determined

**Flammability (solid, gas)**

Not applicable

**Upper/lower flammability or explosive limits**

Lower explosion limit appr. 3,2 %(V)

Upper explosion limit appr. 53 %(V)

Source Literature value

**Vapour pressure**

Value appr. 23 hPa

Temperature 20 °C

Method Value taken from the literature

**Vapour density**

Remarks not determined

**Density**

Remarks not determined

**Solubility in water**

Remarks miscible

**Ignition temperature**

Value appr. 410 °C

Source Literature value

**Viscosity**Remarks  
Remarks not determined**9.2. Other information****Other information**

None known

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None

**10.2. Chemical stability**

No hazardous reactions known.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

**10.4. Conditions to avoid**

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No hazardous reactions known.

**10.5. Incompatible materials**

None

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity**

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

**Acute dermal toxicity**

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

**Acute inhalational toxicity**

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

**Skin corrosion/irritation**

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

**Serious eye damage/irritation**

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

**Sensitization**

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

**Mutagenicity**

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

**Reproductive toxicity**

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

**Carcinogenicity**

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

**Specific Target Organ Toxicity (STOT)****Single exposure**

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

**Repeated exposure**

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

**Aspiration hazard**

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

**Experience in practice**

Provided all the recommended protective and safety precautions are taken, experience shows that no risk to health can be expected.

**Other information**

There are no data available on the mixture itself.

The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and not classified.

**SECTION 12: Ecological information****12.1. Toxicity****General information**

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008

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and is not classified as dangerous for the environment.

**12.2. Persistence and degradability****General information**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential****General information**

There are no data available on the mixture itself.

**12.4. Mobility in soil****General information**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment****General information**

There are no data available on the mixture itself.

**12.6. Other adverse effects****General information**

There are no data available on the mixture itself.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

The product can be placed with other household refuse. Small residues in containers can be washed-out with water and put into the drainage system.

**Disposal recommendations for packaging**

Packaging that cannot be cleaned should be disposed off as product waste. Completely emptied packagings can be given for recycling.

**SECTION 14: Transport information****Land transport ADR/RID**

Non-dangerous goods

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Label -

**14.4. Packing group**

Packing group -

Transport category 0

**14.5. Environmental hazards**

-

**Marine transport IMDG/GGVSee**

The product does not constitute a hazardous substance in sea transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-



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**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

no

**Air transport ICAO/IATA**

The product does not constitute a hazardous substance in air transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

-

**Information for all modes of transport****14.6. Special precautions for user**

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Other information****14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

no

**SECTION 15: Regulatory information \*\*\*****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC \*\*\***

VOC (EU) 0 %

**Other information**

All components are contained in the TSCA inventory or exempted.

All components are contained in the AICS inventory.

All components are contained in the PICCS inventory.

All components are contained in the DSL inventory.

All components are contained in the IECSC inventory.

All components are contained in the NZIOC inventory.

All components are contained in the ENCS inventory.

All components are contained in the ECL inventory.

**15.2. Chemical safety assessment**

For this preparation a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Hazard statements listed in Chapter 3**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.

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H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure:
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**CLP categories listed in Chapter 3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

**Supplemental information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*  
 This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.  
 The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.  
 The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.

As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

Safety data sheet in accordance with regulation (EC) No 1907/2006



Trade name: Marabu Aqua Pen MaKeManga Hautfarbe

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-02

Replaces Version: 1 / GB

Print date: 17.03.17

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

### **1.1. Product identifier**

Marabu Aqua Pen MaKeManga Hautfarbe

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

#### **Use of the substance/preparation**

Paint

#### **Identified Uses**

SU21

Consumer uses: Private households (= general public = consumers)

PC9a

Coatings and paints, thinners, paint removers

### **1.3. Details of the supplier of the safety data sheet**

#### **Address**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Fax no.

+49-7141/691-147

Information provided

Department product safety

by / telephone

E-mail address of

PRSI@marabu.de

person responsible

for this SDS

### **1.4. Emergency telephone number**

(+49) (0)621-60-43333

## **SECTION 2: Hazards identification \*\*\***

### **2.1. Classification of the substance or mixture**

This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

#### **Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

EUH208 Contains

A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1), May produce an allergic reaction.

#### **Supplemental information**

#### **Labelling according to regulation (EU) No 528/2012 \*\*\***

Contains a biocidal product: A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

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**Chemical characterization**

Paint based on water

**Hazardous ingredients****Ethanediol**

CAS No.	107-21-1			
EINECS no.	203-473-3			
Registration no.	01-2119456816-28			
Concentration	>= 1	<	10	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

**Bronopol (INN)**

CAS No.	52-51-7			
EINECS no.	200-143-0			
Concentration	>= 0,01	<	0,1	%

Classification (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318
Skin Irrit. 2	H315
STOT SE 3	H335
Acute Tox. 4	H302
Acute Tox. 4	H312
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	H400	M = 10
Aquatic Chronic 1	H410	M = 1

**A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**

CAS No.	55965-84-9			
Concentration		<	0,0015	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 3	H331
Aquatic Chronic 1	H410
Aquatic Acute 1	H400
Skin Sens. 1	H317
Skin Corr. 1B	H314
Acute Tox. 3	H311
Acute Tox. 3	H301

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	>= 0,6
Eye Irrit. 2	H319	<= 0,06 < 0,6
Skin Irrit. 2	H315	<= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015

**Further ingredients \*\*\*****Glycerol**

CAS No.	56-81-5			
EINECS no.	200-289-5			
Concentration	>= 10	<	25	% [3]

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[3] Substance with occupational exposure limits

**SECTION 4: First aid measures****4.1. Description of first aid measures****After skin contact**

Wash with plenty of water and soap. Do NOT use solvents or thinners.

**After eye contact**

Separate eyelids, wash the eyes thoroughly with water (15 min.). In case of irritation consult an oculist.

**After ingestion**

Rinse mouth thoroughly with water. If larger amounts are swallowed or in the event of symptoms take medical treatment.

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

Until now no symptoms known so far.

**4.3. Indication of any immediate medical attention and special treatment needed****Hints for the physician / treatment**

Treat symptomatically

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Foam, Sand, Water

**5.2. Special hazards arising from the substance or mixture**In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); dense black smoke**5.3. Advice for firefighters****Other information**

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

No particular measures required.

**6.2. Environmental precautions**

No particular measures required.

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

Clean preferably with a detergent - avoid use of solvents.

**6.4. Reference to other sections**

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

**SECTION 7: Handling and storage**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**7.1. Precautions for safe handling****Advice on safe handling**

Avoid skin and eye contact. Smoking, eating and drinking shall be prohibited in application area.

**Advice on protection against fire and explosion**

No special measures required.

**Classification of fires / temperature class / Ignition group / Dust explosion class**

Temperature class T2

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Store in frostfree conditions.

**Storage class according to TRGS 510**Storage class according to 12 Non-combustible liquids  
TRGS 510**7.3. Specific end use(s)**

Paint

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limit values****Ethanediol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Skin resorption / sensibilisation: Sk; Status: 2011		

**Glycerol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Status: 2011		

**Other information**

There are not known any further control parameters.

**Derived No/Minimal Effect Levels (DNEL/DMEL)****Ethanediol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	35	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	106	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

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Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	7	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	53	mg/kg

**Predicted No Effect Concentration (PNEC)****Ethanediol**

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	199,5	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	37	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	3,7	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	1,53	mg/kg

**8.2. Exposure controls****Exposure controls**

Provide adequate ventilation.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Form	liquid
Colour	coloured
Odour	odourless
Odour threshold	
Remarks	No data available

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**Melting point**

Remarks not determined

**Freezing point**

Remarks not determined

**Initial boiling point and boiling range**

Value appr. 100 °C

Pressure 1.013 hPa

Source Literature value

**Flash point**

Remarks Not applicable

**Evaporation rate (ether = 1) :**

Remarks not determined

**Flammability (solid, gas)**

Not applicable

**Upper/lower flammability or explosive limits**

Lower explosion limit appr. 3,2 %(V)

Upper explosion limit appr. 53 %(V)

Source Literature value

**Vapour pressure**

Value appr. 23 hPa

Temperature 20 °C

Method Value taken from the literature

**Vapour density**

Remarks not determined

**Density**

Remarks not determined

**Solubility in water**

Remarks miscible

**Ignition temperature**

Value appr. 410 °C

Source Literature value

**Viscosity**Remarks  
Remarks not determined**9.2. Other information****Other information**

None known

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None

**10.2. Chemical stability**

No hazardous reactions known.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

**10.4. Conditions to avoid**



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No hazardous reactions known.

**10.5. Incompatible materials**

None

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity**

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

**Acute dermal toxicity**

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

**Acute inhalational toxicity**

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

**Skin corrosion/irritation**

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

**Serious eye damage/irritation**

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

**Sensitization**

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

**Mutagenicity**

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

**Reproductive toxicity**

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

**Carcinogenicity**

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

**Specific Target Organ Toxicity (STOT)****Single exposure**

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

**Repeated exposure**

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

**Aspiration hazard**

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

**Experience in practice**

Provided all the recommended protective and safety precautions are taken, experience shows that no risk to health can be expected.

**Other information**

There are no data available on the mixture itself.

The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and not classified.

**SECTION 12: Ecological information****12.1. Toxicity****General information**

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008

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and is not classified as dangerous for the environment.

**12.2. Persistence and degradability****General information**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential****General information**

There are no data available on the mixture itself.

**12.4. Mobility in soil****General information**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment****General information**

There are no data available on the mixture itself.

**12.6. Other adverse effects****General information**

There are no data available on the mixture itself.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

The product can be placed with other household refuse. Small residues in containers can be washed-out with water and put into the drainage system.

**Disposal recommendations for packaging**

Packaging that cannot be cleaned should be disposed off as product waste. Completely emptied packagings can be given for recycling.

**SECTION 14: Transport information****Land transport ADR/RID**

Non-dangerous goods

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Label -

**14.4. Packing group**

Packing group -

Transport category 0

**14.5. Environmental hazards**

-

**Marine transport IMDG/GGVSee**

The product does not constitute a hazardous substance in sea transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

no

**Air transport ICAO/IATA**

The product does not constitute a hazardous substance in air transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

-

**Information for all modes of transport****14.6. Special precautions for user**

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Other information****14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

no

**SECTION 15: Regulatory information \*\*\*****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC \*\*\***

VOC (EU) 0 %

**Other information**

All components are contained in the TSCA inventory or exempted.

All components are contained in the AICS inventory.

All components are contained in the PICCS inventory.

All components are contained in the DSL inventory.

All components are contained in the IECSC inventory.

All components are contained in the NZIOC inventory.

All components are contained in the ENCS inventory.

All components are contained in the ECL inventory.

**15.2. Chemical safety assessment**

For this preparation a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Hazard statements listed in Chapter 3**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.

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H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure:
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**CLP categories listed in Chapter 3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

**Supplemental information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.

As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

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

### **1.1. Product identifier**

Marabu Aqua Pen MaKeManga Rosa

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

#### **Use of the substance/preparation**

Paint

#### **Identified Uses**

SU21

Consumer uses: Private households (= general public = consumers)

PC9a

Coatings and paints, thinners, paint removers

### **1.3. Details of the supplier of the safety data sheet**

#### **Address**

Marabu GmbH &amp; Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Fax no.

+49-7141/691-147

Information provided

Department product safety

by / telephone

E-mail address of

PRSI@marabu.de

person responsible

for this SDS

### **1.4. Emergency telephone number**

(+49) (0)621-60-43333

## **SECTION 2: Hazards identification \*\*\***

### **2.1. Classification of the substance or mixture**

This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

#### **Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

EUH208 Contains

A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1), May produce an allergic reaction.

#### **Supplemental information**

#### **Labelling according to regulation (EU) No 528/2012 \*\*\***

Contains a biocidal product: A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**Chemical characterization**

Paint based on water

**Hazardous ingredients****Ethanediol**

CAS No.	107-21-1				
EINECS no.	203-473-3				
Registration no.	01-2119456816-28				
Concentration	>= 1	<	10	%	

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

**Bronopol (INN)**

CAS No.	52-51-7				
EINECS no.	200-143-0				
Concentration	>= 0,01	<	0,1	%	

Classification (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318
Skin Irrit. 2	H315
STOT SE 3	H335
Acute Tox. 4	H302
Acute Tox. 4	H312
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	H400	M = 10
Aquatic Chronic 1	H410	M = 1

**A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**

CAS No.	55965-84-9				
Concentration		<	0,0015	%	

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 3	H331
Aquatic Chronic 1	H410
Aquatic Acute 1	H400
Skin Sens. 1	H317
Skin Corr. 1B	H314
Acute Tox. 3	H311
Acute Tox. 3	H301

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	>= 0,6
Eye Irrit. 2	H319	<= 0,06 < 0,6
Skin Irrit. 2	H315	<= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015

**Further ingredients \*\*\*****Glycerol**

CAS No.	56-81-5				
EINECS no.	200-289-5				
Concentration	>= 10	<	25	%	[3]

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\*  
\*  
\*

[3] Substance with occupational exposure limits

**SECTION 4: First aid measures****4.1. Description of first aid measures****After skin contact**

Wash with plenty of water and soap. Do NOT use solvents or thinners.

**After eye contact**

Separate eyelids, wash the eyes thoroughly with water (15 min.). In case of irritation consult an oculist.

**After ingestion**

Rinse mouth thoroughly with water. If larger amounts are swallowed or in the event of symptoms take medical treatment.

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

Until now no symptoms known so far.

**4.3. Indication of any immediate medical attention and special treatment needed****Hints for the physician / treatment**

Treat symptomatically

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Foam, Sand, Water

**5.2. Special hazards arising from the substance or mixture**In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); dense black smoke**5.3. Advice for firefighters****Other information**

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

No particular measures required.

**6.2. Environmental precautions**

No particular measures required.

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

Clean preferably with a detergent - avoid use of solvents.

**6.4. Reference to other sections**

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

**SECTION 7: Handling and storage**

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**7.1. Precautions for safe handling****Advice on safe handling**

Avoid skin and eye contact. Smoking, eating and drinking shall be prohibited in application area.

**Advice on protection against fire and explosion**

No special measures required.

**Classification of fires / temperature class / Ignition group / Dust explosion class**

Temperature class T2

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Store in frostfree conditions.

**Storage class according to TRGS 510**

Storage class according to TRGS 510 12 Non-combustible liquids

**7.3. Specific end use(s)**

Paint

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limit values****Ethanediol**

List	EH40
Type	WEL
Value	10 mg/m <sup>3</sup>
Skin resorption / sensibilisation: Sk; Status: 2011	

**Glycerol**

List	EH40
Type	WEL
Value	10 mg/m <sup>3</sup>
Status: 2011	

**Other information**

There are not known any further control parameters.

**Derived No/Minimal Effect Levels (DNEL/DMEL)****Ethanediol**

Type of value	Derived No Effect Level (DNEL)
Reference group	Worker
Duration of exposure	Long term
Route of exposure	Inhalative
Mode of action	Local effects
Concentration	35 mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)
Reference group	Worker
Duration of exposure	Long term
Route of exposure	dermal
Mode of action	Systemic effects
Concentration	106 mg/kg

Type of value	Derived No Effect Level (DNEL)
Reference group	Consumer



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Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	7	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	53	mg/kg

**Predicted No Effect Concentration (PNEC)****Ethanediol**

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l

Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	10	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	199,5	mg/l

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	37	mg/kg

Type of value	PNEC	
Type	Marine sediment	
Concentration	3,7	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	1,53	mg/kg

**8.2. Exposure controls****Exposure controls**

Provide adequate ventilation.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Form	liquid
Colour	coloured
Odour	odourless

**Odour threshold**

Remarks	No data available
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**Melting point**

Remarks not determined

**Freezing point**

Remarks not determined

**Initial boiling point and boiling range**

Value appr. 100 °C

Pressure 1.013 hPa

Source Literature value

**Flash point**

Remarks Not applicable

**Evaporation rate (ether = 1) :**

Remarks not determined

**Flammability (solid, gas)**

Not applicable

**Upper/lower flammability or explosive limits**

Lower explosion limit appr. 3,2 %(V)

Upper explosion limit appr. 53 %(V)

Source Literature value

**Vapour pressure**

Value appr. 23 hPa

Temperature 20 °C

Method Value taken from the literature

**Vapour density**

Remarks not determined

**Density**

Remarks not determined

**Solubility in water**

Remarks miscible

**Ignition temperature**

Value appr. 410 °C

Source Literature value

**Viscosity**

Remarks

Remarks not determined

**9.2. Other information****Other information**

None known

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None

**10.2. Chemical stability**

No hazardous reactions known.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

**10.4. Conditions to avoid**

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No hazardous reactions known.

**10.5. Incompatible materials**

None

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity**

Remarks

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

**Acute dermal toxicity**

Remarks

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

**Acute inhalational toxicity**

Remarks

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

**Skin corrosion/irritation**

Remarks

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

**Serious eye damage/irritation**

Remarks

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

**Sensitization**

Remarks

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

**Mutagenicity**

Remarks

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

**Reproductive toxicity**

Remarks

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

**Carcinogenicity**

Remarks

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

**Specific Target Organ Toxicity (STOT)****Single exposure**

Remarks

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

**Repeated exposure**

Remarks

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

**Aspiration hazard**

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

**Experience in practice**

Provided all the recommended protective and safety precautions are taken, experience shows that no risk to health can be expected.

**Other information**

There are no data available on the mixture itself.

The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and not classified.

**SECTION 12: Ecological information****12.1. Toxicity****General information**

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008

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and is not classified as dangerous for the environment.

**12.2. Persistence and degradability****General information**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential****General information**

There are no data available on the mixture itself.

**12.4. Mobility in soil****General information**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment****General information**

There are no data available on the mixture itself.

**12.6. Other adverse effects****General information**

There are no data available on the mixture itself.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

The product can be placed with other household refuse. Small residues in containers can be washed-out with water and put into the drainage system.

**Disposal recommendations for packaging**

Packaging that cannot be cleaned should be disposed off as product waste. Completely emptied packagings can be given for recycling.

**SECTION 14: Transport information****Land transport ADR/RID**

Non-dangerous goods

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Label -

**14.4. Packing group**

Packing group -

Transport category 0

**14.5. Environmental hazards**

-

**Marine transport IMDG/GGVSee**

The product does not constitute a hazardous substance in sea transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

no

**Air transport ICAO/IATA**

The product does not constitute a hazardous substance in air transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

-

**Information for all modes of transport****14.6. Special precautions for user**

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Other information****14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

no

**SECTION 15: Regulatory information \*\*\*****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC \*\*\***

VOC (EU) 0 %

**Other information**

All components are contained in the TSCA inventory or exempted.

All components are contained in the AICS inventory.

All components are contained in the PICCS inventory.

All components are contained in the DSL inventory.

All components are contained in the IECSC inventory.

All components are contained in the NZIOC inventory.

All components are contained in the ENCS inventory.

All components are contained in the ECL inventory.

**15.2. Chemical safety assessment**

For this preparation a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Hazard statements listed in Chapter 3**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Rosa

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-03

Replaces Version: 1 / GB

Print date: 17.03.17

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure:
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**CLP categories listed in Chapter 3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

**Supplemental information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*  
 This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.  
 The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.  
 The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.  
 As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.  
 The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Marabu Aqua Pen MaKeManga Himbeere

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/preparation**

Paint

**Identified Uses**

SU21

Consumer uses: Private households (= general public = consumers)

PC9a

Coatings and paints, thinners, paint removers

**1.3. Details of the supplier of the safety data sheet****Address**

Marabu GmbH &amp; Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Fax no.

+49-7141/691-147

Information provided  
by / telephone

Department product safety

E-mail address of  
person responsible  
for this SDS

PRSI@marabu.de

**1.4. Emergency telephone number**

(+49) (0)621-60-43333

**SECTION 2: Hazards identification \*\*\*****2.1. Classification of the substance or mixture**

This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

**2.2. Label elements****Labelling according to regulation (EC) No 1272/2008****Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

EUH208 Contains

A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and  
2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1). May  
produce an allergic reaction.**Supplemental information****Labelling according to regulation (EU) No 528/2012 \*\*\***Contains a biocidal product: A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and  
2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**2.3. Other hazards**

No special hazards have to be mentioned.

**SECTION 3: Composition/information on ingredients \*\*\*****3.2. Mixtures**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

**Chemical characterization**

Paint based on water

**Hazardous ingredients****Ethanediol**

CAS No.	107-21-1				
EINECS no.	203-473-3				
Registration no.	01-2119456816-28				
Concentration	>= 1	<	10	%	

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

**Bronopol (INN)**

CAS No.	52-51-7				
EINECS no.	200-143-0				
Concentration	>= 0,01	<	0,1	%	

Classification (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318
Skin Irrit. 2	H315
STOT SE 3	H335
Acute Tox. 4	H302
Acute Tox. 4	H312
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	H400	M = 10
Aquatic Chronic 1	H410	M = 1

**A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**

CAS No.	55965-84-9				
Concentration		<	0,0015	%	

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 3	H331
Aquatic Chronic 1	H410
Aquatic Acute 1	H400
Skin Sens. 1	H317
Skin Corr. 1B	H314
Acute Tox. 3	H311
Acute Tox. 3	H301

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	>= 0,6
Eye Irrit. 2	H319	<= 0,06 < 0,6
Skin Irrit. 2	H315	<= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015

**Further ingredients \*\*\*****Glycerol**

CAS No.	56-81-5				
EINECS no.	200-289-5				
Concentration	>= 10	<	25	%	[3]



**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

\*  
\*  
\*

[3] Substance with occupational exposure limits

**SECTION 4: First aid measures****4.1. Description of first aid measures****After skin contact**

Wash with plenty of water and soap. Do NOT use solvents or thinners.

**After eye contact**

Separate eyelids, wash the eyes thoroughly with water (15 min.). In case of irritation consult an oculist.

**After ingestion**

Rinse mouth thoroughly with water. If larger amounts are swallowed or in the event of symptoms take medical treatment.

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

Until now no symptoms known so far.

**4.3. Indication of any immediate medical attention and special treatment needed****Hints for the physician / treatment**

Treat symptomatically

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Foam, Sand, Water

**5.2. Special hazards arising from the substance or mixture**In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); dense black smoke**5.3. Advice for firefighters****Other information**

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

No particular measures required.

**6.2. Environmental precautions**

No particular measures required.

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

Clean preferably with a detergent - avoid use of solvents.

**6.4. Reference to other sections**

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

**SECTION 7: Handling and storage**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

**7.1. Precautions for safe handling****Advice on safe handling**

Avoid skin and eye contact. Smoking, eating and drinking shall be prohibited in application area.

**Advice on protection against fire and explosion**

No special measures required.

**Classification of fires / temperature class / Ignition group / Dust explosion class**

Temperature class T2

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Store in frostfree conditions.

**Storage class according to TRGS 510**Storage class according to 12 Non-combustible liquids  
TRGS 510**7.3. Specific end use(s)**

Paint

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limit values****Ethanediol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Skin resorption / sensibilisation: Sk; Status: 2011		

**Glycerol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Status: 2011		

**Other information**

There are not known any further control parameters.

**Derived No/Minimal Effect Levels (DNEL/DMEL)****Ethanediol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	35	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	106	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	7	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	53	mg/kg

**Predicted No Effect Concentration (PNEC)****Ethandiol**

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	199,5	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	37	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	3,7	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	1,53	mg/kg

**8.2. Exposure controls****Exposure controls**

Provide adequate ventilation.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Form	liquid
Colour	coloured
Odour	odourless
Odour threshold	
Remarks	No data available

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

**Melting point**

Remarks not determined

**Freezing point**

Remarks not determined

**Initial boiling point and boiling range**

Value	appr. 100	°C
Pressure	1.013	hPa
Source	Literature value	

**Flash point**

Remarks Not applicable

**Evaporation rate (ether = 1) :**

Remarks not determined

**Flammability (solid, gas)**

Not applicable

**Upper/lower flammability or explosive limits**

Lower explosion limit	appr. 3,2	%(V)
Upper explosion limit	appr. 53	%(V)
Source	Literature value	

**Vapour pressure**

Value	appr. 23	hPa
Temperature	20	°C
Method	Value taken from the literature	

**Vapour density**

Remarks not determined

**Density**

Remarks not determined

**Solubility in water**

Remarks miscible

**Ignition temperature**

Value	appr. 410	°C
Source	Literature value	

**Viscosity**

Remarks	
Remarks	not determined

**9.2. Other information****Other information**

None known

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None

**10.2. Chemical stability**

No hazardous reactions known.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

**10.4. Conditions to avoid**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

No hazardous reactions known.

**10.5. Incompatible materials**

None

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity**

Remarks

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

**Acute dermal toxicity**

Remarks

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

**Acute inhalational toxicity**

Remarks

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

**Skin corrosion/irritation**

Remarks

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

**Serious eye damage/irritation**

Remarks

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

**Sensitization**

Remarks

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

**Mutagenicity**

Remarks

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

**Reproductive toxicity**

Remarks

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

**Carcinogenicity**

Remarks

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

**Specific Target Organ Toxicity (STOT)****Single exposure**

Remarks

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

**Repeated exposure**

Remarks

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

**Aspiration hazard**

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

**Experience in practice**

Provided all the recommended protective and safety precautions are taken, experience shows that no risk to health can be expected.

**Other information**

There are no data available on the mixture itself.

The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and not classified.

**SECTION 12: Ecological information****12.1. Toxicity****General information**

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

and is not classified as dangerous for the environment.

**12.2. Persistence and degradability****General information**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential****General information**

There are no data available on the mixture itself.

**12.4. Mobility in soil****General information**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment****General information**

There are no data available on the mixture itself.

**12.6. Other adverse effects****General information**

There are no data available on the mixture itself.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

The product can be placed with other household refuse. Small residues in containers can be washed-out with water and put into the drainage system.

**Disposal recommendations for packaging**

Packaging that cannot be cleaned should be disposed off as product waste.  
Completely emptied packagings can be given for recycling.

**SECTION 14: Transport information****Land transport ADR/RID**

Non-dangerous goods

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class

-

Label

-

**14.4. Packing group**

Packing group

-

Transport category

0

**14.5. Environmental hazards**

-

**Marine transport IMDG/GGVSee**

The product does not constitute a hazardous substance in sea transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

no

**Air transport ICAO/IATA**

The product does not constitute a hazardous substance in air transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

-

**Information for all modes of transport****14.6. Special precautions for user**

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Other information****14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

no

**SECTION 15: Regulatory information \*\*\*****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC \*\*\***

VOC (EU) 0 %

**Other information**

All components are contained in the TSCA inventory or exempted.

All components are contained in the AICS inventory.

All components are contained in the PICCS inventory.

All components are contained in the DSL inventory.

All components are contained in the IECSC inventory.

All components are contained in the NZIOC inventory.

All components are contained in the ENCS inventory.

All components are contained in the ECL inventory.

**15.2. Chemical safety assessment**

For this preparation a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Hazard statements listed in Chapter 3**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Himbeere

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-04

Replaces Version: 1 / GB

Print date: 17.03.17

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure:
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**CLP categories listed in Chapter 3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

**Supplemental information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.

As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.



Safety data sheet in accordance with regulation (EC) No 1907/2006



Trade name: Marabu Aqua Pen MaKeManga Ultramarinblau dunkel

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-05

Replaces Version: 1 / GB

Print date: 17.03.17

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

### **1.1. Product identifier**

Marabu Aqua Pen MaKeManga Ultramarinblau dunkel

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

#### **Use of the substance/preparation**

Paint

#### **Identified Uses**

SU21

Consumer uses: Private households (= general public = consumers)

PC9a

Coatings and paints, thinners, paint removers

### **1.3. Details of the supplier of the safety data sheet**

#### **Address**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Fax no.

+49-7141/691-147

Information provided

Department product safety

by / telephone

E-mail address of

PRSI@marabu.de

person responsible

for this SDS

### **1.4. Emergency telephone number**

(+49) (0)621-60-43333

## **SECTION 2: Hazards identification \*\*\***

### **2.1. Classification of the substance or mixture**

This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

#### **Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

EUH208 Contains

A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1). May produce an allergic reaction.

#### **Supplemental information**

#### **Labelling according to regulation (EU) No 528/2012 \*\*\***

Contains a biocidal product: A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

Trade name: Marabu Aqua Pen MaKeManga Ultramarinblau dunkel

Version: 2 / GB

Date revised: 03.03.2017

Substance number: 014500101-05

Replaces Version: 1 / GB

Print date: 17.03.17

**Chemical characterization**

Paint based on water

**Hazardous ingredients****Ethanediol**

CAS No.	107-21-1			
EINECS no.	203-473-3			
Registration no.	01-2119456816-28			
Concentration	>= 1	<	10	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

**Bronopol (INN)**

CAS No.	52-51-7			
EINECS no.	200-143-0			
Concentration	>= 0,01	<	0,1	%

Classification (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318
Skin Irrit. 2	H315
STOT SE 3	H335
Acute Tox. 4	H302
Acute Tox. 4	H312
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	H400	M = 10
Aquatic Chronic 1	H410	M = 1

**A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**

CAS No.	55965-84-9			
Concentration		<	0,0015	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 3	H331
Aquatic Chronic 1	H410
Aquatic Acute 1	H400
Skin Sens. 1	H317
Skin Corr. 1B	H314
Acute Tox. 3	H311
Acute Tox. 3	H301

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	>= 0,6
Eye Irrit. 2	H319	<= 0,06 < 0,6
Skin Irrit. 2	H315	<= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015

**Further ingredients \*\*\*****Glycerol**

CAS No.	56-81-5			
EINECS no.	200-289-5			
Concentration	>= 10	<	25	% [3]

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[3] Substance with occupational exposure limits

**SECTION 4: First aid measures****4.1. Description of first aid measures****After skin contact**

Wash with plenty of water and soap. Do NOT use solvents or thinners.

**After eye contact**

Separate eyelids, wash the eyes thoroughly with water (15 min.). In case of irritation consult an oculist.

**After ingestion**

Rinse mouth thoroughly with water. If larger amounts are swallowed or in the event of symptoms take medical treatment.

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

Until now no symptoms known so far.

**4.3. Indication of any immediate medical attention and special treatment needed****Hints for the physician / treatment**

Treat symptomatically

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Foam, Sand, Water

**5.2. Special hazards arising from the substance or mixture**In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); dense black smoke**5.3. Advice for firefighters****Other information**

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

No particular measures required.

**6.2. Environmental precautions**

No particular measures required.

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

Clean preferably with a detergent - avoid use of solvents.

**6.4. Reference to other sections**

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

**SECTION 7: Handling and storage**

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**7.1. Precautions for safe handling****Advice on safe handling**

Avoid skin and eye contact. Smoking, eating and drinking shall be prohibited in application area.

**Advice on protection against fire and explosion**

No special measures required.

**Classification of fires / temperature class / Ignition group / Dust explosion class**

Temperature class T2

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Store in frostfree conditions.

**Storage class according to TRGS 510**Storage class according to 12 Non-combustible liquids  
TRGS 510**7.3. Specific end use(s)**

Paint

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limit values****Ethanediol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Skin resorption / sensibilisation: Sk; Status: 2011		

**Glycerol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Status: 2011		

**Other information**

There are not known any further control parameters.

**Derived No/Minimal Effect Levels (DNEL/DMEL)****Ethanediol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	35	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	106	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

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Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	7	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	53	mg/kg

**Predicted No Effect Concentration (PNEC)****EthanedioI**

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	199,5	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	37	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	3,7	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	1,53	mg/kg

**8.2. Exposure controls****Exposure controls**

Provide adequate ventilation.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Form	liquid
Colour	coloured
Odour	odourless
Odour threshold	
Remarks	No data available

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**Melting point**

Remarks not determined

**Freezing point**

Remarks not determined

**Initial boiling point and boiling range**

Value appr. 100 °C

Pressure 1.013 hPa

Source Literature value

**Flash point**

Remarks Not applicable

**Evaporation rate (ether = 1) :**

Remarks not determined

**Flammability (solid, gas)**

Not applicable

**Upper/lower flammability or explosive limits**

Lower explosion limit appr. 3,2 %(V)

Upper explosion limit appr. 53 %(V)

Source Literature value

**Vapour pressure**

Value appr. 23 hPa

Temperature 20 °C

Method Value taken from the literature

**Vapour density**

Remarks not determined

**Density**

Remarks not determined

**Solubility in water**

Remarks miscible

**Ignition temperature**

Value appr. 410 °C

Source Literature value

**Viscosity**

Remarks not determined

**9.2. Other information****Other information**

None known

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None

**10.2. Chemical stability**

No hazardous reactions known.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

**10.4. Conditions to avoid**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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No hazardous reactions known.

**10.5. Incompatible materials**

None

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity**

Remarks

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

**Acute dermal toxicity**

Remarks

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

**Acute inhalational toxicity**

Remarks

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

**Skin corrosion/irritation**

Remarks

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

**Serious eye damage/irritation**

Remarks

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

**Sensitization**

Remarks

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

**Mutagenicity**

Remarks

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

**Reproductive toxicity**

Remarks

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

**Carcinogenicity**

Remarks

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

**Specific Target Organ Toxicity (STOT)****Single exposure**

Remarks

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

**Repeated exposure**

Remarks

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

**Aspiration hazard**

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

**Experience in practice**

Provided all the recommended protective and safety precautions are taken, experience shows that no risk to health can be expected.

**Other information**

There are no data available on the mixture itself.

The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and not classified.

**SECTION 12: Ecological information****12.1. Toxicity****General information**

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008

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and is not classified as dangerous for the environment.

**12.2. Persistence and degradability****General information**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential****General information**

There are no data available on the mixture itself.

**12.4. Mobility in soil****General information**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment****General information**

There are no data available on the mixture itself.

**12.6. Other adverse effects****General information**

There are no data available on the mixture itself.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

The product can be placed with other household refuse. Small residues in containers can be washed-out with water and put into the drainage system.

**Disposal recommendations for packaging**

Packaging that cannot be cleaned should be disposed off as product waste.  
Completely emptied packagings can be given for recycling.

**SECTION 14: Transport information****Land transport ADR/RID**

Non-dangerous goods

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class

-

Label

-

**14.4. Packing group**

Packing group

-

Transport category

0

**14.5. Environmental hazards**

-

**Marine transport IMDG/GGVSee**

The product does not constitute a hazardous substance in sea transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-



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**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

no

**Air transport ICAO/IATA**

The product does not constitute a hazardous substance in air transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

-

**Information for all modes of transport****14.6. Special precautions for user**

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Other information****14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

no

**SECTION 15: Regulatory information \*\*\*****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC \*\*\***

VOC (EU) 0 %

**Other information**

All components are contained in the TSCA inventory or exempted.

All components are contained in the AICS inventory.

All components are contained in the PICCS inventory.

All components are contained in the DSL inventory.

All components are contained in the IECSC inventory.

All components are contained in the NZIOC inventory.

All components are contained in the ENCS inventory.

All components are contained in the ECL inventory.

**15.2. Chemical safety assessment**

For this preparation a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Hazard statements listed in Chapter 3**

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

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H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure:
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**CLP categories listed in Chapter 3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

**Supplemental information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*  
 This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.  
 The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.  
 The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.

As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Marabu Aqua Pen MaKeManga Bernstein

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/preparation**

Paint

**Identified Uses**

SU21

Consumer uses: Private households (= general public = consumers)

PC9a

Coatings and paints, thinners, paint removers

**1.3. Details of the supplier of the safety data sheet****Address**

Marabu GmbH &amp; Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Fax no.

+49-7141/691-147

Information provided  
by / telephone

Department product safety

E-mail address of  
person responsible  
for this SDS

PRSI@marabu.de

**1.4. Emergency telephone number**

(+49) (0)621-60-43333

**SECTION 2: Hazards identification \*\*\*****2.1. Classification of the substance or mixture**

This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

**2.2. Label elements****Labelling according to regulation (EC) No 1272/2008****Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

EUH208 Contains

A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and  
2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1), May  
produce an allergic reaction.**Supplemental information****Labelling according to regulation (EU) No 528/2012 \*\*\***Contains a biocidal product: A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and  
2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**2.3. Other hazards**

No special hazards have to be mentioned.

**SECTION 3: Composition/information on ingredients \*\*\*****3.2. Mixtures**

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**Chemical characterization**

Paint based on water

**Hazardous ingredients****Ethanediol**

CAS No.	107-21-1			
EINECS no.	203-473-3			
Registration no.	01-2119456816-28			
Concentration	>= 1	<	10	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

**Bronopol (INN)**

CAS No.	52-51-7			
EINECS no.	200-143-0			
Concentration	>= 0,01	<	0,1	%

Classification (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318
Skin Irrit. 2	H315
STOT SE 3	H335
Acute Tox. 4	H302
Acute Tox. 4	H312
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	H400	M = 10
Aquatic Chronic 1	H410	M = 1

**A mixture of: 5-Chloro-2-methyl-2h-isothiazol-3-one [EC-no. 247-500-7] and 2-Methyl-2H-isothiazol-3-one [EC-no. 220-239-6] (3:1) / C(M)IT/MIT (3:1)**

CAS No.	55965-84-9			
Concentration		<	0,0015	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 3	H331
Aquatic Chronic 1	H410
Aquatic Acute 1	H400
Skin Sens. 1	H317
Skin Corr. 1B	H314
Acute Tox. 3	H311
Acute Tox. 3	H301

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	>= 0,6
Eye Irrit. 2	H319	<= 0,06 < 0,6
Skin Irrit. 2	H315	<= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015

**Further ingredients \*\*\*****Glycerol**

CAS No.	56-81-5			
EINECS no.	200-289-5			
Concentration	>= 10	<	25	% [3]

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[3] Substance with occupational exposure limits

**SECTION 4: First aid measures****4.1. Description of first aid measures****After skin contact**

Wash with plenty of water and soap. Do NOT use solvents or thinners.

**After eye contact**

Separate eyelids, wash the eyes thoroughly with water (15 min.). In case of irritation consult an oculist.

**After ingestion**

Rinse mouth thoroughly with water. If larger amounts are swallowed or in the event of symptoms take medical treatment.

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

Until now no symptoms known so far.

**4.3. Indication of any immediate medical attention and special treatment needed****Hints for the physician / treatment**

Treat symptomatically

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Foam, Sand, Water

**5.2. Special hazards arising from the substance or mixture**In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); dense black smoke**5.3. Advice for firefighters****Other information**

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

No particular measures required.

**6.2. Environmental precautions**

No particular measures required.

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

Clean preferably with a detergent - avoid use of solvents.

**6.4. Reference to other sections**

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

**SECTION 7: Handling and storage**

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**7.1. Precautions for safe handling****Advice on safe handling**

Avoid skin and eye contact. Smoking, eating and drinking shall be prohibited in application area.

**Advice on protection against fire and explosion**

No special measures required.

**Classification of fires / temperature class / Ignition group / Dust explosion class**

Temperature class T2

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Store in frostfree conditions.

**Storage class according to TRGS 510**Storage class according to 12 Non-combustible liquids  
TRGS 510**7.3. Specific end use(s)**

Paint

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limit values****Ethanediol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Skin resorption / sensibilisation: Sk; Status: 2011		

**Glycerol**

List	EH40	
Type	WEL	
Value	10	mg/m <sup>3</sup>
Status: 2011		

**Other information**

There are not known any further control parameters.

**Derived No/Minimal Effect Levels (DNEL/DMEL)****Ethanediol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	35	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	106	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

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Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	7	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	53	mg/kg

**Predicted No Effect Concentration (PNEC)****Ethanediol**

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	199,5	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	37	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	3,7	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	1,53	mg/kg

**8.2. Exposure controls****Exposure controls**

Provide adequate ventilation.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Form	liquid
Colour	coloured
Odour	odourless
Odour threshold	
Remarks	No data available

**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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**Melting point**

Remarks not determined

**Freezing point**

Remarks not determined

**Initial boiling point and boiling range**

Value appr. 100 °C

Pressure 1.013 hPa

Source Literature value

**Flash point**

Remarks Not applicable

**Evaporation rate (ether = 1) :**

Remarks not determined

**Flammability (solid, gas)**

Not applicable

**Upper/lower flammability or explosive limits**

Lower explosion limit appr. 3,2 %(V)

Upper explosion limit appr. 53 %(V)

Source Literature value

**Vapour pressure**

Value appr. 23 hPa

Temperature 20 °C

Method Value taken from the literature

**Vapour density**

Remarks not determined

**Density**

Remarks not determined

**Solubility in water**

Remarks miscible

**Ignition temperature**

Value appr. 410 °C

Source Literature value

**Viscosity**

Remarks not determined

**9.2. Other information****Other information**

None known

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None

**10.2. Chemical stability**

No hazardous reactions known.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

**10.4. Conditions to avoid**



**Safety data sheet in accordance with regulation (EC) No 1907/2006**

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No hazardous reactions known.

**10.5. Incompatible materials**

None

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity**

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

**Acute dermal toxicity**

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

**Acute inhalational toxicity**

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

**Skin corrosion/irritation**

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

**Serious eye damage/irritation**

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

**Sensitization**

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

**Mutagenicity**

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

**Reproductive toxicity**

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

**Carcinogenicity**

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

**Specific Target Organ Toxicity (STOT)****Single exposure**

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

**Repeated exposure**

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

**Aspiration hazard**

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

**Experience in practice**

Provided all the recommended protective and safety precautions are taken, experience shows that no risk to health can be expected.

**Other information**

There are no data available on the mixture itself.

The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and not classified.

**SECTION 12: Ecological information****12.1. Toxicity****General information**

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008

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and is not classified as dangerous for the environment.

**12.2. Persistence and degradability****General information**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential****General information**

There are no data available on the mixture itself.

**12.4. Mobility in soil****General information**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment****General information**

There are no data available on the mixture itself.

**12.6. Other adverse effects****General information**

There are no data available on the mixture itself.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

The product can be placed with other household refuse. Small residues in containers can be washed-out with water and put into the drainage system.

**Disposal recommendations for packaging**

Packaging that cannot be cleaned should be disposed off as product waste. Completely emptied packagings can be given for recycling.

**SECTION 14: Transport information****Land transport ADR/RID**

Non-dangerous goods

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class

-

Label

-

**14.4. Packing group**

Packing group

-

Transport category

0

**14.5. Environmental hazards**

-

**Marine transport IMDG/GGVSee**

The product does not constitute a hazardous substance in sea transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

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**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

no

**Air transport ICAO/IATA**

The product does not constitute a hazardous substance in air transport.

**14.1. UN number**

UN -

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

Class -

Subsidiary risk -

**14.4. Packing group**

Packing group -

**14.5. Environmental hazards**

-

**Information for all modes of transport****14.6. Special precautions for user**

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Other information****14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

no

**SECTION 15: Regulatory information \*\*\*****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC \*\*\***

VOC (EU) 0 %

**Other information**

All components are contained in the TSCA inventory or exempted.

All components are contained in the AICS inventory.

All components are contained in the PICCS inventory.

All components are contained in the DSL inventory.

All components are contained in the IECSC inventory.

All components are contained in the NZIOC inventory.

All components are contained in the ENCS inventory.

All components are contained in the ECL inventory.

**15.2. Chemical safety assessment**

For this preparation a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Hazard statements listed in Chapter 3**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.

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H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure:
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**CLP categories listed in Chapter 3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

**Supplemental information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.

As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.