

MSDS for #24547 - MARB AQUA PEN GRAPIX  
 Safety data sheet in accordance with regulation (EC) No 1907/2006



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 142

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-142

Replaces Version: 1 / GB

Print date: 12.05.23

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

### **1.1. Product identifier**

Marabu Aqua Pen Metropol. 6pcs. MNA 142

### **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/Manufacturer**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no. +49-7141/691-0

Information provided Department product safety

by / telephone

E-mail address of PRSI@marabu.com

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**

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), May produce an allergic reaction.

#### **Supplemental information**

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

Contains a biocidal product: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

#### **Hazardous ingredients \*\*\***

Ethenediol

CAS No. 107-21-1



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EINECS no. 203-473-3  
Registration no. 01-2119456816-28  
Concentration  $\geq 1$  < 10 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 4 H302  
STOT RE 2 H373

**reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)**

CAS No. 55965-84-9  
Concentration  $\geq 0,001$  < 0,0015 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 2 H330  
Aquatic Chronic 1 H410  
Aquatic Acute 1 H400  
Skin Sens. 1A H317  
Skin Corr. 1C H314  
Acute Tox. 2 H310  
Acute Tox. 3 H301  
Eye Dam. 1 H318

Concentration limits (Regulation (EC) No. 1272/2008)  
Skin Corr. 1C H314  $\geq 0,6$   
Eye Irrit. 2 H319  $\geq 0,06 < 0,6$   
Skin Irrit. 2 H315  $\geq 0,06 < 0,6$   
Skin Sens. 1 H317  $\geq 0,0015$   
Aquatic Acute 1 H410 M = 100  
Aquatic Chronic 1 H410 M = 100  
1  
Eye Dam. 1 H318  $\geq 0,6$  %

**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**

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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

### 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.

### 7.3. Specific end use(s)

Paint

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limit values

##### Ethenediol

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

##### Ethenediol

List	EU			
Value	52	mg/m <sup>3</sup>	20	ppm(V)
Short term exposure limit	104	mg/m <sup>3</sup>	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

##### Glycerol

List	EH40
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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  
 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



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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.

### Respiratory protection

Not necessary.

### Hand protection

Not necessary.

In case of intensive contact wear protective gloves.

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm

Breakthrough time < 30 min

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

### Eye protection

Not necessary.

### Body protection

Not applicable.

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	liquid		
<b>Colour</b>	coloured		
<b>Odour</b>	odourless		
<b>Melting point</b>			
Remarks	not determined		
<b>Freezing point</b>			
Remarks	not determined		
<b>Boiling point or initial boiling point and boiling range</b>			
Value	appr. 100		°C
Pressure	1.013	hPa	
Source	Literature value		
<b>Flammability</b>			
Not applicable			



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### Upper and lower explosive limits

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

### Flash point

Remarks Not applicable

### Ignition temperature

Value	appr. 410	°C
Source	Literature value	

### Viscosity

Remarks  
Remarks not determined

### Vapour pressure

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

### Density and/or relative density

Remarks not determined

### Relative vapour density

Remarks not determined

## 9.2. Other information

### Odour threshold

Remarks No data available

### Evaporation rate (ether = 1) :

Remarks not determined

### Solubility in water

Remarks miscible

### 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

No hazardous reactions known.

### 10.5. Incompatible materials

None

### 10.6. Hazardous decomposition products

No hazardous decomposition products known.

## **SECTION 11: Toxicological information**



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### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

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

#### Acute oral toxicity (Components)

##### Ethanediol

Species	rat		
LD50		7712	mg/kg

#### Acute dermal toxicity

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

#### Acute dermal toxicity (Components)

##### Ethanediol

Species	rabbit		
LD50	>	9530	mg/kg

#### 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

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Ingestion may cause nausea, diarrhoea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

#### Other information

There are no data available on the mixture itself.

The mixture has been assessed following the additivity method of the CLP Regulation (EC) No



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1272/2008 and classified for toxicological hazards accordingly.

## 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 and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for further details.

#### Fish toxicity (Components)

##### Ethanediol

Species	Fathead minnow ( <i>Pimephales promelas</i> )
LC50	8050 mg/l
Duration of exposure	96 h

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	rainbow trout ( <i>Oncorhynchus mykiss</i> )
LC50	0,188 mg/l
Duration of exposure	96 h

#### Daphnia toxicity (Components)

##### Ethanediol

Species	Daphnia magna
	> 10000 mg/l
Duration of exposure	24 h

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Daphnia magna
EC50	0,126 mg/l
Duration of exposure	48 h

#### Algae toxicity (Components)

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Selenastrum capricornutum
EC50	0,027 mg/l
Duration of exposure	72 h

### 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.

### 12.7. Other adverse effects

#### General information

There are no data available on the mixture itself.



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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations for the product

Do not allow to enter drains or water courses.  
 Dispose of waste according to applicable legislation.  
 Dispose of as hazardous waste.

#### 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	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	The product does not constitute a hazardous substance in land transport.-	The product does not constitute a hazardous substance in sea transport.-	The product does not constitute a hazardous substance in air transport.-
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)	-	-	-
Subsidiary risk		-	-
Label			
14.4. Packing group	-	-	-
Transport category	0		
14.5. Environmental hazards	-	no	-

### 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 Maritime transport in bulk according to IMO instruments

no

## SECTION 15: Regulatory information

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

#### VOC

VOC (EU) 5 %



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### Other information

The product does not contain substances of very high concern (SVHC).

### 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.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
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. 2	Acute toxicity, Category 2
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. 1C	Skin corrosion, Category 1C
Skin Sens. 1A	Skin sensitization, Category 1A
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2

### 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.



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 255

Version: 2 / GB

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Substance number: 0145900000103-255

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

### **1.1. Product identifier**

Marabu Aqua Pen Metropol. 6pcs. MNA 255

### **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/Manufacturer**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Information provided

Department product safety

by / telephone

E-mail address of

PRSI@marabu.com

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**

EUH208 Contains

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), May produce an allergic reaction.

#### **Supplemental information**

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

Contains a biocidal product: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

#### **Hazardous ingredients \*\*\***

Ethanediol

CAS No.

107-21-1



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EINECS no. 203-473-3  
Registration no. 01-2119456816-28  
Concentration  $\geq 1$  < 10 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 4 H302  
STOT RE 2 H373

**reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)**

CAS No. 55965-84-9  
Concentration  $\geq 0,001$  < 0,0015 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 2 H330  
Aquatic Chronic 1 H410  
Aquatic Acute 1 H400  
Skin Sens. 1A H317  
Skin Corr. 1C H314  
Acute Tox. 2 H310  
Acute Tox. 3 H301  
Eye Dam. 1 H318

Concentration limits (Regulation (EC) No. 1272/2008)  
Skin Corr. 1C H314  $\geq 0,6$   
Eye Irrit. 2 H319  $\geq 0,06 < 0,6$   
Skin Irrit. 2 H315  $\geq 0,06 < 0,6$   
Skin Sens. 1 H317  $\geq 0,0015$   
Aquatic Acute 1 H410 M = 100  
Aquatic Chronic 1 H410 M = 100  
1  
Eye Dam. 1 H318  $\geq 0,6$  %

**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**

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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

### 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.

### 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: 2011			

##### Ethanediol

List	EU			
Value	52	mg/m <sup>3</sup>	20	ppm(V)
Short term exposure limit	104	mg/m <sup>3</sup>	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

##### Glycerol

List	EH40
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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  
 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



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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.

**Respiratory protection**

Not necessary.

**Hand protection**

Not necessary.

In case of intensive contact wear protective gloves.

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm

Breakthrough time < 30 min

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

**Eye protection**

Not necessary.

**Body protection**

Not applicable.

**SECTION 9: Physical and chemical properties**

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

<b>Physical state</b>	liquid		
<b>Colour</b>	coloured		
<b>Odour</b>	odourless		
<b>Melting point</b>			
Remarks	not determined		
<b>Freezing point</b>			
Remarks	not determined		
<b>Boiling point or initial boiling point and boiling range</b>			
Value	appr. 100		°C
Pressure	1.013	hPa	
Source	Literature value		
<b>Flammability</b>			
Not applicable			



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### Upper and lower explosive limits

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

### Flash point

Remarks Not applicable

### Ignition temperature

Value	appr. 410	°C
Source	Literature value	

### Viscosity

Remarks  
Remarks not determined

### Vapour pressure

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

### Density and/or relative density

Remarks not determined

### Relative vapour density

Remarks not determined

## 9.2. Other information

### Odour threshold

Remarks No data available

### Evaporation rate (ether = 1) :

Remarks not determined

### Solubility in water

Remarks miscible

### 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

No hazardous reactions known.

### 10.5. Incompatible materials

None

### 10.6. Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information





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### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

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

#### Acute oral toxicity (Components)

##### Ethanediol

Species	rat		
LD50		7712	mg/kg

#### Acute dermal toxicity

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

#### Acute dermal toxicity (Components)

##### Ethanediol

Species	rabbit		
LD50	>	9530	mg/kg

#### 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

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Ingestion may cause nausea, diarrhoea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

#### Other information

There are no data available on the mixture itself.

The mixture has been assessed following the additivity method of the CLP Regulation (EC) No



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1272/2008 and classified for toxicological hazards accordingly.

## 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 and is not classified as dangerous for the environment.

#### Fish toxicity (Components)

##### Ethanediol

Species	Fathead minnow ( <i>Pimephales promelas</i> )		
LC50	8050		mg/l
Duration of exposure	96	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	rainbow trout ( <i>Oncorhynchus mykiss</i> )		
LC50	0,188		mg/l
Duration of exposure	96	h	

#### Daphnia toxicity (Components)

##### Ethanediol

Species	Daphnia magna		
	>	10000	mg/l
Duration of exposure	24	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Daphnia magna		
EC50	0,126		mg/l
Duration of exposure	48	h	

#### Algae toxicity (Components)

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Selenastrum capricornutum		
EC50	0,027		mg/l
Duration of exposure	72	h	

### 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.

### 12.7. Other adverse effects

#### General information

There are no data available on the mixture itself.



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**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations for the product**

Do not allow to enter drains or water courses.  
 Dispose of waste according to applicable legislation.  
 Dispose of as hazardous waste.

**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	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
<b>14.1. UN number</b>	The product does not constitute a hazardous substance in land transport.-	The product does not constitute a hazardous substance in sea transport.-	The product does not constitute a hazardous substance in air transport.-
<b>14.2. UN proper shipping name</b>	-	-	-
<b>14.3. Transport hazard class(es)</b>	-	-	-
Subsidiary risk		-	-
Label			
<b>14.4. Packing group</b>	-	-	-
Transport category	0		
<b>14.5. Environmental hazards</b>	-	no	-

**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 Maritime transport in bulk according to IMO instruments**

no

**SECTION 15: Regulatory information**

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

**VOC**

VOC (EU) 5 %



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### Other information

The product does not contain substances of very high concern (SVHC).

### 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.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
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. 2	Acute toxicity, Category 2
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. 1C	Skin corrosion, Category 1C
Skin Sens. 1A	Skin sensitization, Category 1A
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2

### 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 Metropol. 6pcs. MNA 278

### **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/Manufacturer**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no. +49-7141/691-0

Information provided Department product safety

by / telephone

E-mail address of PRSI@marabu.com

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**

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), May produce an allergic reaction.

#### **Supplemental information**

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

Contains a biocidal product: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

#### **Hazardous ingredients \*\*\***

Ethanediol

CAS No. 107-21-1



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EINECS no. 203-473-3  
Registration no. 01-2119456816-28  
Concentration  $\geq 1$  < 10 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 4 H302  
STOT RE 2 H373

**reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)**

CAS No. 55965-84-9  
Concentration  $\geq 0,001$  < 0,0015 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 2 H330  
Aquatic Chronic 1 H410  
Aquatic Acute 1 H400  
Skin Sens. 1A H317  
Skin Corr. 1C H314  
Acute Tox. 2 H310  
Acute Tox. 3 H301  
Eye Dam. 1 H318

Concentration limits (Regulation (EC) No. 1272/2008)  
Skin Corr. 1C H314  $\geq 0,6$   
Eye Irrit. 2 H319  $\geq 0,06 < 0,6$   
Skin Irrit. 2 H315  $\geq 0,06 < 0,6$   
Skin Sens. 1 H317  $\geq 0,0015$   
Aquatic Acute 1 H410 M = 100  
Aquatic Chronic 1 H410 M = 100  
1  
Eye Dam. 1 H318  $\geq 0,6$  %

**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**

MSDS for #24547 - MARB AQUA PEN GRAPIX  
 Safety data sheet in accordance with regulation (EC) No 1907/2006



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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

### 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.

### 7.3. Specific end use(s)

Paint

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limit values

##### Ethenediol

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

##### Ethenediol

List	EU			
Value	52	mg/m <sup>3</sup>	20	ppm(V)
Short term exposure limit	104	mg/m <sup>3</sup>	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

##### Glycerol

List	EH40
------	------



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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  
 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





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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.

### Respiratory protection

Not necessary.

### Hand protection

Not necessary.

In case of intensive contact wear protective gloves.

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm

Breakthrough time < 30 min

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

### Eye protection

Not necessary.

### Body protection

Not applicable.

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	liquid		
<b>Colour</b>	coloured		
<b>Odour</b>	odourless		
<b>Melting point</b>			
Remarks	not determined		
<b>Freezing point</b>			
Remarks	not determined		
<b>Boiling point or initial boiling point and boiling range</b>			
Value	appr. 100		°C
Pressure	1.013	hPa	
Source	Literature value		
<b>Flammability</b>			
Not applicable			



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### Upper and lower explosive limits

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

### Flash point

Remarks Not applicable

### Ignition temperature

Value	appr. 410	°C
Source	Literature value	

### Viscosity

Remarks  
Remarks not determined

### Vapour pressure

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

### Density and/or relative density

Remarks not determined

### Relative vapour density

Remarks not determined

## 9.2. Other information

### Odour threshold

Remarks No data available

### Evaporation rate (ether = 1) :

Remarks not determined

### Solubility in water

Remarks miscible

### 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

No hazardous reactions known.

### 10.5. Incompatible materials

None

### 10.6. Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information



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### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

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

#### Acute oral toxicity (Components)

##### Ethanediol

Species	rat		
LD50	7712		mg/kg

#### Acute dermal toxicity

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

#### Acute dermal toxicity (Components)

##### Ethanediol

Species	rabbit		
LD50	> 9530		mg/kg

#### 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

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Ingestion may cause nausea, diarrhoea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

#### Other information

There are no data available on the mixture itself.

The mixture has been assessed following the additivity method of the CLP Regulation (EC) No



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1272/2008 and classified for toxicological hazards accordingly.

## 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 and is not classified as dangerous for the environment.

#### Fish toxicity (Components)

##### Ethanediol

Species	Fathead minnow ( <i>Pimephales promelas</i> )		
LC50	8050		mg/l
Duration of exposure	96	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	rainbow trout ( <i>Oncorhynchus mykiss</i> )		
LC50	0,188		mg/l
Duration of exposure	96	h	

#### Daphnia toxicity (Components)

##### Ethanediol

Species	Daphnia magna		
	>	10000	mg/l
Duration of exposure	24	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Daphnia magna		
EC50	0,126		mg/l
Duration of exposure	48	h	

#### Algae toxicity (Components)

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Selenastrum capricornutum		
EC50	0,027		mg/l
Duration of exposure	72	h	

### 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.

### 12.7. Other adverse effects

#### General information

There are no data available on the mixture itself.



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 278

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-278

Replaces Version: 1 / GB

Print date: 12.05.23

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations for the product

Do not allow to enter drains or water courses.  
 Dispose of waste according to applicable legislation.  
 Dispose of as hazardous waste.

#### 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	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	The product does not constitute a hazardous substance in land transport.-	The product does not constitute a hazardous substance in sea transport.-	The product does not constitute a hazardous substance in air transport.-
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)	-	-	-
Subsidiary risk		-	-
Label			
14.4. Packing group	-	-	-
Transport category	0		
14.5. Environmental hazards	-	no	-

### 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 Maritime transport in bulk according to IMO instruments

no

## SECTION 15: Regulatory information

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

#### VOC

VOC (EU) 5 %



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 278

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 014590000103-278

Replaces Version: 1 / GB

Print date: 12.05.23

### Other information

The product does not contain substances of very high concern (SVHC).

### 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.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
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. 2	Acute toxicity, Category 2
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. 1C	Skin corrosion, Category 1C
Skin Sens. 1A	Skin sensitization, Category 1A
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2

### 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.



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-297

Replaces Version: 1 / GB

Print date: 12.05.23

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

### **1.1. Product identifier**

Marabu Aqua Pen Metropol. 6pcs. MNA 297

### **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/Manufacturer**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Information provided

Department product safety

by / telephone

E-mail address of

PRSI@marabu.com

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**

EUH208 Contains

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), May produce an allergic reaction.

#### **Supplemental information**

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

Contains a biocidal product: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

#### **Hazardous ingredients \*\*\***

Ethenediol

CAS No.

107-21-1



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

Version: 2 / GB

Date revised: 24.01.2020

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EINECS no. 203-473-3  
Registration no. 01-2119456816-28  
Concentration  $\geq 1$  < 10 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 4 H302  
STOT RE 2 H373

**reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)**

CAS No. 55965-84-9  
Concentration  $\geq 0,001$  < 0,0015 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 2 H330  
Aquatic Chronic 1 H410  
Aquatic Acute 1 H400  
Skin Sens. 1A H317  
Skin Corr. 1C H314  
Acute Tox. 2 H310  
Acute Tox. 3 H301  
Eye Dam. 1 H318

Concentration limits (Regulation (EC) No. 1272/2008)  
Skin Corr. 1C H314  $\geq 0,6$   
Eye Irrit. 2 H319  $\geq 0,06 < 0,6$   
Skin Irrit. 2 H315  $\geq 0,06 < 0,6$   
Skin Sens. 1 H317  $\geq 0,0015$   
Aquatic Acute 1 H410 M = 100  
Aquatic Chronic 1 H410 M = 100  
1  
Eye Dam. 1 H318  $\geq 0,6$  %

**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**



MSDS for #24547 - MARB AQUA PEN GRAPIX  
~~Safety data sheet in accordance with regulation (EC) No 1907/2006~~



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

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Date revised: 24.01.2020

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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

### 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.

### 7.3. Specific end use(s)

Paint

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limit values

##### Ethenediol

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

##### Ethenediol

List	EU			
Value	52	mg/m <sup>3</sup>	20	ppm(V)
Short term exposure limit	104	mg/m <sup>3</sup>	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

##### Glycerol

List	EH40
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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  
 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



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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.

**Respiratory protection**

Not necessary.

**Hand protection**

Not necessary.

In case of intensive contact wear protective gloves.

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm

Breakthrough time < 30 min

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

**Eye protection**

Not necessary.

**Body protection**

Not applicable.

**SECTION 9: Physical and chemical properties**

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

<b>Physical state</b>	liquid		
<b>Colour</b>	coloured		
<b>Odour</b>	odourless		
<b>Melting point</b>			
Remarks	not determined		
<b>Freezing point</b>			
Remarks	not determined		
<b>Boiling point or initial boiling point and boiling range</b>			
Value	appr. 100		°C
Pressure	1.013	hPa	
Source	Literature value		
<b>Flammability</b>			
Not applicable			



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

Version: 2 / GB

Date revised: 24.01.2020

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### Upper and lower explosive limits

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

### Flash point

Remarks Not applicable

### Ignition temperature

Value	appr. 410	°C
Source	Literature value	

### Viscosity

Remarks not determined

### Vapour pressure

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

### Density and/or relative density

Remarks not determined

### Relative vapour density

Remarks not determined

## 9.2. Other information

### Odour threshold

Remarks No data available

### Evaporation rate (ether = 1) :

Remarks not determined

### Solubility in water

Remarks miscible

### 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

No hazardous reactions known.

### 10.5. Incompatible materials

None

### 10.6. Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-297

Replaces Version: 1 / GB

Print date: 12.05.23

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

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

#### Acute oral toxicity (Components)

##### Ethanediol

Species	rat		
LD50		7712	mg/kg

#### Acute dermal toxicity

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

#### Acute dermal toxicity (Components)

##### Ethanediol

Species	rabbit		
LD50	>	9530	mg/kg

#### 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

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Ingestion may cause nausea, diarrhoea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

#### Other information

There are no data available on the mixture itself.

The mixture has been assessed following the additivity method of the CLP Regulation (EC) No



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-297

Replaces Version: 1 / GB

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1272/2008 and classified for toxicological hazards accordingly.

## 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 and is not classified as dangerous for the environment.

#### Fish toxicity (Components)

##### Ethanediol

Species	Fathead minnow ( <i>Pimephales promelas</i> )		
LC50	8050		mg/l
Duration of exposure	96	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	rainbow trout ( <i>Oncorhynchus mykiss</i> )		
LC50	0,188		mg/l
Duration of exposure	96	h	

#### Daphnia toxicity (Components)

##### Ethanediol

Species	Daphnia magna		
	>	10000	mg/l
Duration of exposure	24	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Daphnia magna		
EC50	0,126		mg/l
Duration of exposure	48	h	

#### Algae toxicity (Components)

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Selenastrum capricornutum		
EC50	0,027		mg/l
Duration of exposure	72	h	

### 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.

### 12.7. Other adverse effects

#### General information

There are no data available on the mixture itself.



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-297

Replaces Version: 1 / GB

Print date: 12.05.23

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations for the product

Do not allow to enter drains or water courses.  
 Dispose of waste according to applicable legislation.  
 Dispose of as hazardous waste.

#### 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	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	The product does not constitute a hazardous substance in land transport.-	The product does not constitute a hazardous substance in sea transport.-	The product does not constitute a hazardous substance in air transport.-
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)	-	-	-
Subsidiary risk		-	-
Label			
14.4. Packing group	-	-	-
Transport category	0		
14.5. Environmental hazards	-	no	-

### 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 Maritime transport in bulk according to IMO instruments

no

## SECTION 15: Regulatory information

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

#### VOC

VOC (EU) 5 %



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 297

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 014590000103-297

Replaces Version: 1 / GB

Print date: 12.05.23

### Other information

The product does not contain substances of very high concern (SVHC).

### 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.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
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. 2	Acute toxicity, Category 2
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. 1C	Skin corrosion, Category 1C
Skin Sens. 1A	Skin sensitization, Category 1A
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2

### 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.





Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 073

Version: 1 / GB

Date revised: 22.11.2019

Substance number: 0145900000103-073

Replaces Version: - / GB

Print date: 12.05.23

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

### **1.1. Product identifier**

Marabu Aqua Pen Metropol. 6pcs. MNA 073

### **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/Manufacturer**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Information provided

Department product safety

by / telephone

E-mail address of

PRSI@marabu.com

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**

EUH208 Contains

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), May produce an allergic reaction.

#### **Supplemental information**

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

Contains a biocidal product: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

#### **Hazardous ingredients**

Ethanediol

CAS No.

107-21-1



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 073

Version: 1 / GB

Date revised: 22.11.2019

Substance number: 014590000103-073

Replaces Version: - / GB

Print date: 12.05.23

EINECS no. 203-473-3  
Registration no. 01-2119456816-28  
Concentration  $\geq$  1 < 10 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 4 H302  
STOT RE 2 H373

**reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)**

CAS No. 55965-84-9  
Concentration  $\geq$  0,001 < 0,0015 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 2 H330  
Aquatic Chronic 1 H410  
Aquatic Acute 1 H400  
Skin Sens. 1A H317  
Skin Corr. 1C H314  
Acute Tox. 2 H310  
Acute Tox. 3 H301  
Eye Dam. 1 H318

Concentration limits (Regulation (EC) No. 1272/2008)  
Skin Corr. 1C H314  $\geq$  0,6  
Eye Irrit. 2 H319  $\geq$  0,06 < 0,6  
Skin Irrit. 2 H315  $\geq$  0,06 < 0,6  
Skin Sens. 1 H317  $\geq$  0,0015  
Aquatic Acute 1 H410 M = 100  
Aquatic Chronic 1 H410 M = 100  
1  
Eye Dam. 1 H318  $\geq$  0,6 %

**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**

MSDS for #24547 - MARB AQUA PEN GRAPIX  
~~Safety data sheet in accordance with regulation (EC) No 1907/2006~~



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Replaces Version: - / GB

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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

### 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.

### 7.3. Specific end use(s)

Paint

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limit values

##### Ethenediol

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

##### Ethenediol

List	EU			
Value	52	mg/m <sup>3</sup>	20	ppm(V)
Short term exposure limit	104	mg/m <sup>3</sup>	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

##### Glycerol

List	EH40
------	------



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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  
 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



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 073

Version: 1 / GB

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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.

**Respiratory protection**

Not necessary.

**Hand protection**

Not necessary.

In case of intensive contact wear protective gloves.

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm

Breakthrough time < 30 min

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

**Eye protection**

Not necessary.

**Body protection**

Not applicable.

**SECTION 9: Physical and chemical properties**

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

<b>Physical state</b>	liquid		
<b>Colour</b>	coloured		
<b>Odour</b>	odourless		
<b>Melting point</b>			
Remarks	not determined		
<b>Freezing point</b>			
Remarks	not determined		
<b>Boiling point or initial boiling point and boiling range</b>			
Value	appr. 100		°C
Pressure	1.013	hPa	
Source	Literature value		
<b>Flammability</b>			
Not applicable			



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### Upper and lower explosive limits

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

### Flash point

Remarks Not applicable

### Ignition temperature

Value	appr. 410	°C
Source	Literature value	

### Viscosity

Remarks  
Remarks not determined

### Vapour pressure

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

### Density and/or relative density

Remarks not determined

### Relative vapour density

Remarks not determined

## 9.2. Other information

### Odour threshold

Remarks No data available

### Evaporation rate (ether = 1) :

Remarks not determined

### Solubility in water

Remarks miscible

### 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

No hazardous reactions known.

### 10.5. Incompatible materials

None

### 10.6. Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information



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### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

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

#### Acute oral toxicity (Components)

##### Ethanediol

Species	rat		
LD50	7712		mg/kg

#### Acute dermal toxicity

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

#### Acute dermal toxicity (Components)

##### Ethanediol

Species	rabbit		
LD50	> 9530		mg/kg

#### 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

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Ingestion may cause nausea, diarrhoea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

#### Other information

There are no data available on the mixture itself.

The mixture has been assessed following the additivity method of the CLP Regulation (EC) No



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1272/2008 and classified for toxicological hazards accordingly.

## 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 and is not classified as dangerous for the environment.

#### Fish toxicity (Components)

##### Ethanediol

Species	Fathead minnow ( <i>Pimephales promelas</i> )		
LC50	8050		mg/l
Duration of exposure	96	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	rainbow trout ( <i>Oncorhynchus mykiss</i> )		
LC50	0,188		mg/l
Duration of exposure	96	h	

#### Daphnia toxicity (Components)

##### Ethanediol

Species	Daphnia magna		
	>	10000	mg/l
Duration of exposure	24	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Daphnia magna		
EC50	0,126		mg/l
Duration of exposure	48	h	

#### Algae toxicity (Components)

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Selenastrum capricornutum		
EC50	0,027		mg/l
Duration of exposure	72	h	

### 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.

### 12.7. Other adverse effects

#### General information

There are no data available on the mixture itself.





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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations for the product

Do not allow to enter drains or water courses.  
 Dispose of waste according to applicable legislation.  
 Dispose of as hazardous waste.

#### 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	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
<b>14.1. UN number</b>	The product does not constitute a hazardous substance in land transport.-	The product does not constitute a hazardous substance in sea transport.-	The product does not constitute a hazardous substance in air transport.-
<b>14.2. UN proper shipping name</b>	-	-	-
<b>14.3. Transport hazard class(es)</b>	-	-	-
Subsidiary risk		-	-
Label			
<b>14.4. Packing group</b>	-	-	-
Transport category	0		
<b>14.5. Environmental hazards</b>	-	no	-

### 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 Maritime transport in bulk according to IMO instruments

no

## SECTION 15: Regulatory information

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

#### VOC

VOC (EU) 5 %



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### Other information

The product does not contain substances of very high concern (SVHC).

### 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.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
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. 2	Acute toxicity, Category 2
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. 1C	Skin corrosion, Category 1C
Skin Sens. 1A	Skin sensitization, Category 1A
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2

### 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.



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 090

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-090

Replaces Version: 1 / GB

Print date: 12.05.23

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

### **1.1. Product identifier**

Marabu Aqua Pen Metropol. 6pcs. MNA 090

### **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/Manufacturer**

Marabu GmbH & Co. KG

Asperger Strasse 4

71732 Tamm

Germany

Telephone no.

+49-7141/691-0

Information provided

Department product safety

by / telephone

E-mail address of

PRSI@marabu.com

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**

EUH208 Contains

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), May produce an allergic reaction.

#### **Supplemental information**

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

Contains a biocidal product: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

### **2.3. Other hazards**

No special hazards have to be mentioned.

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

### **3.2. Mixtures**

#### **Hazardous ingredients \*\*\***

Ethanediol

CAS No.

107-21-1



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 090

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-090

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Print date: 12.05.23

EINECS no. 203-473-3  
Registration no. 01-2119456816-28  
Concentration  $\geq 1$  < 10 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 4 H302  
STOT RE 2 H373

**reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)**

CAS No. 55965-84-9  
Concentration  $\geq 0,001$  < 0,0015 %  
Classification (Regulation (EC) No. 1272/2008)  
Acute Tox. 2 H330  
Aquatic Chronic 1 H410  
Aquatic Acute 1 H400  
Skin Sens. 1A H317  
Skin Corr. 1C H314  
Acute Tox. 2 H310  
Acute Tox. 3 H301  
Eye Dam. 1 H318

Concentration limits (Regulation (EC) No. 1272/2008)  
Skin Corr. 1C H314  $\geq 0,6$   
Eye Irrit. 2 H319  $\geq 0,06 < 0,6$   
Skin Irrit. 2 H315  $\geq 0,06 < 0,6$   
Skin Sens. 1 H317  $\geq 0,0015$   
Aquatic Acute 1 H410 M = 100  
Aquatic Chronic 1 H410 M = 100  
1  
Eye Dam. 1 H318  $\geq 0,6$  %

**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**



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 090

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-090

Replaces Version: 1 / GB

Print date: 12.05.23

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

### 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.

### 7.3. Specific end use(s)

Paint

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limit values

##### Ethenediol

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

Skin resorption / sensibilisation: Sk: 2011

##### Ethenediol

List	EU			
Value	52	mg/m <sup>3</sup>	20	ppm(V)
Short term exposure limit	104	mg/m <sup>3</sup>	40	ppm(V)

Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG

##### Glycerol

List	EH40			
------	------	--	--	--



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Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-090

Replaces Version: 1 / GB

Print date: 12.05.23

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)**

**Ethandiol**

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  
 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



Trade name: Marabu Aqua Pen Metropol. 6pcs. MNA 090

Version: 2 / GB

Date revised: 24.01.2020

Substance number: 0145900000103-090

Replaces Version: 1 / GB

Print date: 12.05.23

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.

### Respiratory protection

Not necessary.

### Hand protection

Not necessary.

In case of intensive contact wear protective gloves.

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm

Breakthrough time < 30 min

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

### Eye protection

Not necessary.

### Body protection

Not applicable.

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	liquid		
<b>Colour</b>	coloured		
<b>Odour</b>	odourless		
<b>Melting point</b>			
Remarks	not determined		
<b>Freezing point</b>			
Remarks	not determined		
<b>Boiling point or initial boiling point and boiling range</b>			
Value	appr. 100		°C
Pressure	1.013	hPa	
Source	Literature value		
<b>Flammability</b>			
Not applicable			



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### Upper and lower explosive limits

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

### Flash point

Remarks Not applicable

### Ignition temperature

Value	appr. 410	°C
Source	Literature value	

### Viscosity

Remarks  
Remarks not determined

### Vapour pressure

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

### Density and/or relative density

Remarks not determined

### Relative vapour density

Remarks not determined

## 9.2. Other information

### Odour threshold

Remarks No data available

### Evaporation rate (ether = 1) :

Remarks not determined

### Solubility in water

Remarks miscible

### 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

No hazardous reactions known.

### 10.5. Incompatible materials

None

### 10.6. Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information





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### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

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

#### Acute oral toxicity (Components)

##### Ethanediol

Species	rat		
LD50		7712	mg/kg

#### Acute dermal toxicity

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

#### Acute dermal toxicity (Components)

##### Ethanediol

Species	rabbit		
LD50	>	9530	mg/kg

#### 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

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Ingestion may cause nausea, diarrhoea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

#### Other information

There are no data available on the mixture itself.

The mixture has been assessed following the additivity method of the CLP Regulation (EC) No



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1272/2008 and classified for toxicological hazards accordingly.

## 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 and is not classified as dangerous for the environment.

#### Fish toxicity (Components)

##### Ethanediol

Species	Fathead minnow ( <i>Pimephales promelas</i> )		
LC50	8050		mg/l
Duration of exposure	96	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	rainbow trout ( <i>Oncorhynchus mykiss</i> )		
LC50	0,188		mg/l
Duration of exposure	96	h	

#### Daphnia toxicity (Components)

##### Ethanediol

Species	Daphnia magna		
	>	10000	mg/l
Duration of exposure	24	h	

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Daphnia magna		
EC50	0,126		mg/l
Duration of exposure	48	h	

#### Algae toxicity (Components)

##### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Species	Selenastrum capricornutum		
EC50	0,027		mg/l
Duration of exposure	72	h	

### 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.

### 12.7. Other adverse effects

#### General information

There are no data available on the mixture itself.



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**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations for the product**

Do not allow to enter drains or water courses.  
 Dispose of waste according to applicable legislation.  
 Dispose of as hazardous waste.

**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	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
<b>14.1. UN number</b>	The product does not constitute a hazardous substance in land transport.-	The product does not constitute a hazardous substance in sea transport.-	The product does not constitute a hazardous substance in air transport.-
<b>14.2. UN proper shipping name</b>	-	-	-
<b>14.3. Transport hazard class(es)</b>	-	-	-
Subsidiary risk		-	-
Label			
<b>14.4. Packing group</b>	-	-	-
Transport category	0		
<b>14.5. Environmental hazards</b>	-	no	-

**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 Maritime transport in bulk according to IMO instruments**

no

**SECTION 15: Regulatory information**

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

**VOC**

VOC (EU) 5 %



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### Other information

The product does not contain substances of very high concern (SVHC).

### 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.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
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. 2	Acute toxicity, Category 2
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. 1C	Skin corrosion, Category 1C
Skin Sens. 1A	Skin sensitization, Category 1A
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2

### 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.