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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 055

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

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

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

Aquatic Chronic 3	H412

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard statements ***

H412	Harmful to aquatic life with long lasting effects.

Precautionary statements ***

P273	Avoid release to the environment.
P501.9	Dispose of contents/container as problematic waste.
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				
EINECS no.	203-473-3				
Registration no.	01-2119456816-28				
Concentration	>=	1	<	10	%

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

Acute Tox. 4	H302
STOT RE 2	H373

Hydrogen [4-[[4-(diethylamino)phenyl][4-[ethyl(3-sulphonatobenzyl)amino]phenyl]methylene]cyclohexa-2,5-dien-1-ylidene](ethyl)(3-sulphonatobenzyl)ammonium, sodium salt

CAS No.	4129-84-4				
EINECS no.	223-942-6				
Concentration	>=	1	<	2,5	%

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

Aquatic Chronic 2	H411

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	>=	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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); 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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List	EH40	
Type	WEL	
Value	10	mg/m³

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

Predicted No Effect Concentration (PNEC)

Ethanediol

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

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

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 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 classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Fish toxicity (Components)

Ethanediol

Species	Fathead minnow (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.
H411	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
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 068

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

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

EINECS no. 203-473-3
Registration no. 01-2119456816-28
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

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 >= 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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); 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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List EH40

Type	WEL	
Value	10	mg/m³
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/m³

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/m³

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

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l

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

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

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

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

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state	liquid
Colour	coloured
Odour	odourless

Melting point

Remarks	not determined

Freezing point

Remarks	not determined

Boiling point or initial boiling point and boiling range

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

Flammability

Not applicable

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

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

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 (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs 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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

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

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

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	>=	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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); 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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List	EH40

Type	WEL	
Value	10	mg/m³
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/m³

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/m³

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

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l

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

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

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

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

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state	liquid
Colour	coloured
Odour	odourless

Melting point

Remarks	not determined

Freezing point

Remarks	not determined

Boiling point or initial boiling point and boiling range

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

Flammability

Not applicable

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

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

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 (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 078

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

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

EINECS no. 203-473-3
Registration no. 01-2119456816-28
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

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 >= 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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); 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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List	EH40

Type	WEL	
Value	10	mg/m³
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/m³

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/m³

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

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l

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

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

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

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

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state	liquid
Colour	coloured
Odour	odourless

Melting point

Remarks: not determined

Freezing point

Remarks: not determined

Boiling point or initial boiling point and boiling range

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

Flammability

Not applicable

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

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

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 (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 095

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

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

EINECS no. 203-473-3
Registration no. 01-2119456816-28
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

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 >= 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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); 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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List EH40

Type	WEL	
Value	10	mg/m³
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/m³

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/m³

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

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l

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

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

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

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

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state	liquid
Colour	coloured
Odour	odourless

Melting point

Remarks: not determined

Freezing point

Remarks: not determined

Boiling point or initial boiling point and boiling range

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

Flammability

Not applicable

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

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

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 (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 132

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

Aquatic Chronic 3	H412

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard statements

H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P501.9	Dispose of contents/container as problematic waste.
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				
EINECS no.	203-473-3				
Registration no.	01-2119456816-28				
Concentration	>=	1	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
	Acute Tox. 4	H302			
	STOT RE 2	H373			

3,4,5,6-tetrachloro-2-(1,4,5,8-tetrabromo-6-hydroxy-3-oxoxanthen-9-yl)benzoic acid

CAS No.	18472-87-2				
EINECS no.	242-355-6				
Concentration	>=	2,5	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
	Eye Irrit. 2	H319			
	Aquatic Chronic 2	H411			

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	>=	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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); dense black smoke; Hydrogen chloride (HCl); Hydrogen bromide (HBr)

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/m³		
Skin resorption / sensibilisation: Sk: 2011				

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

Glycerol

List	EH40	
Type	WEL	
Value	10	mg/m³
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/m³
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/m³
Type of value	Derived No Effect Level (DNEL)		
Reference group	Consumer		
Duration of exposure	Long term		
Route of exposure	dermal		
Mode of action	Systemic effects		
Concentration		53	mg/kg

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC		
Type	Freshwater		
Concentration		10	mg/l

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

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

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 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 classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Fish toxicity (Components)

Ethanediol

Species	Fathead minnow (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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	%

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.
H319	Causes serious eye irritation.
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.
H411	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
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 154

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

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

EINECS no. 203-473-3
Registration no. 01-2119456816-28
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

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 >= 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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); 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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List EH40

Type	WEL	
Value	10	mg/m³
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/m³
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/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	53	mg/kg

Predicted No Effect Concentration (PNEC)

Ethanediol

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

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

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state	liquid
Colour	coloured
Odour	odourless

Melting point

Remarks: not determined

Freezing point

Remarks: not determined

Boiling point or initial boiling point and boiling range

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

Flammability

Not applicable

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

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

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 (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 023

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

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	Disodium 2-(2,4,5,7-tetrabromo-6-oxido-3-oxoxanthen-9-yl)benzoate, 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
EINECS no. 203-473-3
Registration no. 01-2119456816-28
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

Disodium 2-(2,4,5,7-tetrabromo-6-oxido-3-oxoxanthen-9-yl)benzoate
CAS No. 17372-87-1
EINECS no. 241-409-6
Concentration >= 0,1 < 1 %
Classification (Regulation (EC) No. 1272/2008)

Skin Sens. 1	H317
Eye Irrit. 2	H319

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 >= 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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); dense black smoke; Nitrogen oxides (NOx); Sulphur oxides

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/m³		
Skin resorption / sensibilisation: Sk: 2011				

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

Glycerol

List	EH40	
Type	WEL	
Value	10	mg/m³
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/m³	
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/m³	
Type of value	Derived No Effect Level (DNEL)		
Reference group	Consumer		
Duration of exposure	Long term		
Route of exposure	dermal		
Mode of action	Systemic effects		
Concentration	53	mg/kg	

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC		
Type	Freshwater		
Concentration	10	mg/l	
Type of value	PNEC		
Type	Saltwater		
Concentration	1	mg/l	
Type of value	PNEC		

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state	liquid
Colour	coloured
Odour	odourless
Melting point	

Remarks	not determined			

Freezing point

Remarks	not determined			

Boiling point or initial boiling point and boiling range

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

Flammability

Not applicable

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

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 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 (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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	%

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.
H319	Causes serious eye irritation.
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
Eye Irrit. 2	Eye irritation, Category 2
Skin Corr. 1C	Skin corrosion, Category 1C
Skin Sens. 1	Skin sensitization, Category 1
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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 030

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

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

EINECS no. 203-473-3
Registration no. 01-2119456816-28
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
STOT RE 2	H373

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 >= 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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); dense black smoke; Nitrogen oxides (NOx); Sulphur oxides

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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List	EH40

Type	WEL	
Value	10	mg/m³
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/m³

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/m³

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

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC	
Type	Freshwater	
Concentration	10	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1	mg/l

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

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

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

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

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state	liquid
Colour	coloured
Odour	odourless

Melting point

Remarks: not determined

Freezing point

Remarks: not determined

Boiling point or initial boiling point and boiling range

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

Flammability

Not applicable

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

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

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 (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 037

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

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

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

Aquatic Chronic 3	H412

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard statements *

H412	Harmful to aquatic life with long lasting effects.

Precautionary statements *

P273	Avoid release to the environment.
P501.9	Dispose of contents/container as problematic waste.
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				
EINECS no.	203-473-3				
Registration no.	01-2119456816-28				
Concentration	>=	1	<	10	%

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

Acute Tox. 4	H302
STOT RE 2	H373

Hydrogen [4-[[4-(diethylamino)phenyl][4-[ethyl(3-sulphonatobenzyl)amino]phenyl]methylene]cyclohexa-2,5-dien-1-ylidene](ethyl)(3-sulphonatobenzyl)ammonium, sodium salt

CAS No.	4129-84-4				
EINECS no.	223-942-6				
Concentration	>=	1	<	2,5	%

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

Aquatic Chronic 2	H411

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	>=	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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); 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/m³		

Skin resorption / sensibilisation: Sk: 2011

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)

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

Glycerol

List	EH40	
Type	WEL	
Value	10	mg/m³

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

Predicted No Effect Concentration (PNEC)

Ethanediol

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

Physical state liquid
Colour coloured
Odour odourless

Melting point
Remarks not determined

Freezing point
Remarks not determined

Boiling point or initial boiling point and boiling range
Value appr. 100 °C
Pressure 1.013 hPa
Source Literature value

Flammability
Not applicable

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

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 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 classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Fish toxicity (Components)

Ethanediol

Species	Fathead minnow (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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 %

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.
H411	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
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
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.

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

1.1. Product identifier

Marabu Fineliner Doodle 12pcs MNA 045

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 by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

Aquatic Chronic 3	H412

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard statements

H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P501.9	Dispose of contents/container as problematic waste.
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				
EINECS no.	203-473-3				
Registration no.	01-2119456816-28				
Concentration	>=	1	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
	Acute Tox. 4	H302			
	STOT RE 2	H373			

3,4,5,6-tetrachloro-2-(1,4,5,8-tetrabromo-6-hydroxy-3-oxoxanthen-9-yl)benzoic acid

CAS No.	18472-87-2				
EINECS no.	242-355-6				
Concentration	>=	2,5	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
	Eye Irrit. 2	H319			
	Aquatic Chronic 2	H411			

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	>=	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	>= 0,6
Eye Irrit. 2	H319	>= 0,06 < 0,6
Skin Irrit. 2	H315	>= 0,06 < 0,6
Skin Sens. 1	H317	>= 0,0015
Aquatic Acute 1	H410	M = 100
Aquatic Chronic 1	H410	M = 100
Eye Dam. 1	H318	>= 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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); dense black smoke; Hydrogen chloride (HCl); Hydrogen bromide (HBr)

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/m³		
Skin resorption / sensibilisation: Sk: 2011				

Ethanediol

List	EU			
Value	52	mg/m³	20	ppm(V)
Short term exposure limit	104	mg/m³	40	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

Glycerol

List	EH40	
Type	WEL	
Value	10	mg/m³
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/m³
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/m³
Type of value	Derived No Effect Level (DNEL)		
Reference group	Consumer		
Duration of exposure	Long term		
Route of exposure	dermal		
Mode of action	Systemic effects		
Concentration		53	mg/kg

Predicted No Effect Concentration (PNEC)

Ethanediol

Type of value	PNEC		
Type	Freshwater		
Concentration		10	mg/l

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

8.2. Exposure controls

Exposure controls

Provide adequate ventilation.

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

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

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 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 classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Fish toxicity (Components)

Ethanediol

Species	Fathead minnow (Pimephales promelas)		
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 (Oncorhynchus mykiss)		
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.

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	%

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.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
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CLP categories listed in Chapter 3

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Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
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

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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.
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