

# **Patination bleue**

Revision date: 27.07.2022

Product code: 0234

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

# 1.1. Product identifier

Patination bleue

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UFI:
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442W-2NTU-H00K-EFMC

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

#### Use of the substance/mixture

Metal surface treatment products

#### Uses advised against

No further relevant information available.

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

Company name:	MARAWE GmbH & Co. KG	
Street:	Donaustaufer Str. 378 - Gebäude 64	
Place:	D-93055 Regensburg	
Telephone: e-mail: Contact person: Internet:	+49 941 / 29020439 info@marawe.de Product safety department www.marawe.de	Telefax: +49 941 / 29020593
1.4. Emergency telephone number:	+49 941 / 29020439, Mo-Do 9:00 - 16:00 Uhr; Fr 9:00 - 14:00 Uhr	

# **SECTION 2: Hazards identification**

# 2.1. Classification of the substance or mixture

# GB CLP Regulation

Skin Irrit. 2; H315 Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

# 2.2. Label elements

GB CLP Regulation Signal word:

Pictograms:



Warning

Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.

# **Precautionary statements**

ecautionary statemen	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves and eye/face protection.
P302+P352	IF ON SKIN: Wash with plenty of Water.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.



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

# 3.2. Mixtures

# Hazardous components

CAS No	Chemical name				
	EC No	Index No	REACH No		
	Classification (GB CLP Regulation)				
64-17-5	ethanol; ethyl alcohol	_		1.9 - < 5 %	
	200-578-6		01-2119457610-43		
	Flam. Liq. 2, Eye Irrit. 2; H225 H31	9			
12125-02-9	ammonium chloride			1.9 - < 5 %	
	235-186-4		01-2119487950-27		
	Acute Tox. 4, Eye Irrit. 2; H302 H3	19			
10361-29-2	ammonium carbonate			1.9 - < 5 %	
	233-786-0				
	Acute Tox. 4, Eye Irrit. 2; H302 H3				
7664-41-7	ammonia, anhydrous	1 - < 1.9 %			
	231-635-3		01-2119488876-14		
	Flam. Gas 2, Acute Tox. 3, Skin Co H331 H314 H318 H400 H411				
34590-94-8	(2-methoxymethylethoxy)propanol	< 1 %			
	252-104-2		01-2119450011-60		
78-93-3	butanone; ethyl methyl ketone			< 1 %	
	201-159-0		01-2119457290-43		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE	3; H225 H319 H336 EU	H066		
52-51-7	bronopol (INN); 2-bromo-2-nitropro	< 1 %			
	200-143-0				
	Acute Tox. 3, Acute Tox. 3, Acute T Aquatic Chronic 2; H331 H301 H31				

Full text of H and EUH statements: see section 16.



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# Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc.	Limits, M-factors and ATE	
64-17-5	200-578-6	ethanol; ethyl alcohol	1.9 - < 5 %
	inhalation: LC mg/kg	50 = > 20 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 10470	
12125-02-9	235-186-4	ammonium chloride	1.9 - < 5 %
	dermal: LD50	= >2000 mg/kg; oral: LD50 = 1410 mg/kg	
10361-29-2	233-786-0	ammonium carbonate	1.9 - < 5 %
	oral: LD50 = 5	i00 mg/kg	
7664-41-7	231-635-3	ammonia, anhydrous	1 - < 1.9 %
	inhalation: AT mg/kg	E = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: LD50 = 350	
78-93-3	201-159-0	butanone; ethyl methyl ketone	< 1 %
	inhalation: LC	50 = 34,5 mg/l (vapours); dermal: LD50 = 5000 mg/kg; oral: LD50 = 3300 mg/kg	
52-51-7	200-143-0	bronopol (INN); 2-bromo-2-nitropropane-1,3-diol	< 1 %
		50 = > 5 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 oral: LD50 = 180 mg/kg  M acute; H400: M=10	

# SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### **General information**

If unconscious but breathing normally, place in recovery position and seek medical advice. Be careful with contaminated clothes and shoes of the victim - they could still contain the product.

#### After inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

#### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do.

### After ingestion

Rinse mouth immediately and drink 1 glass of of water. Do NOT induce vomiting.

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

May cause skin irritation. May cause eye irritation.

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

In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks.) Treat symptomatically.

### **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

#### Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

#### 5.2. Special hazards arising from the substance or mixture

Non-flammable. Ambient fire may liberate hazardous vapours.

Hazardous decomposition products: Hydrogen chloride (HCl), Nitrogen oxides (NOx), Oxocarbons (CO, CO2)

#### 5.3. Advice for firefighters



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Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

#### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Cool down closed recipients exposed to fire or high temperatures, if possible, from a safe distance with a water spray (risk of explosion) and safely remove from the danger zone.

#### **SECTION 6:** Accidental release measures

# 6.1. Personal precautions, protective equipment and emergency procedures

#### General advice

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of release of larger quantities, inform the responsible authorities.

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

# For containment

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

#### For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### 6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

# **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

#### Advice on safe handling

Avoid contact with skin, eyes and clothes. Store away from food.

#### Advice on protection against fire and explosion

No special fire protection measures are necessary.

#### Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

#### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed.

# Hints on joint storage

No special measures are necessary.

### Further information on storage conditions

Vor Frost schützen!

# 7.3. Specific end use(s)

Metal surface treatment products

# SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters



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# Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
34590-94-8	(2-methoxymethylethoxy) propanol	50	308		TWA (8 h)	WEL
7664-41-7	Ammonia, anhydrous	25	18		TWA (8 h)	WEL
		35	25		STEL (15 min)	WEL
12125-02-9	Ammonium chloride, fume	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

# **Biological Monitoring Guidance Values (EH40)**

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift



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# **DNEL/DMEL** values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
64-17-5	ethanol; ethyl alcohol		-	
Consumer DN	IEL, long-term	oral	systemic	87 mg/kg bw/day
Worker DNEL	., long-term	dermal	systemic	343 mg/kg bw/day
Consumer DN	IEL, long-term	dermal	systemic	206 mg/kg bw/day
Worker DNEL	., acute	inhalation	local	1900 mg/m <sup>3</sup>
Worker DNEL	., long-term	inhalation	systemic	950 mg/m³
Consumer DN	IEL, acute	inhalation	local	950 mg/m³
Consumer DN	NEL, long-term	inhalation	systemic	114 mg/m³
12125-02-9	ammonium chloride	•		
Consumer DN	IEL, long-term	oral	systemic	55,2 mg/kg bw/day
Worker DNEL	., long-term	dermal	systemic	128,9 mg/kg bw/day
Consumer DN	IEL, long-term	dermal	systemic	55,2 mg/kg bw/day
Worker DNEL	., long-term	inhalation	systemic	43,97 mg/m <sup>3</sup>
Consumer DN	IEL, long-term	inhalation	systemic	9,4 mg/m³
7664-41-7	ammonia, anhydrous			
Consumer DN	IEL, acute	oral	systemic	6,8 mg/kg bw/day
Consumer DN	IEL, long-term	oral	systemic	6,8 mg/kg bw/day
Worker DNEL	., acute	dermal	systemic	6,8 mg/kg bw/day
Worker DNEL	., long-term	dermal	systemic	6,8 mg/kg bw/day
Consumer DN	IEL, acute	dermal	systemic	68 mg/kg bw/day
Consumer DN	IEL, long-term	dermal	systemic	68 mg/kg bw/day
Worker DNEL	., acute	inhalation	systemic	47,6 mg/m³
Worker DNEL	., acute	inhalation	local	36 mg/m³
Worker DNEL	., long-term	inhalation	systemic	47,6 mg/m³
Worker DNEL	., long-term	inhalation	local	14 mg/m³
Consumer DN	IEL, acute	inhalation	systemic	23,8 mg/m³
Consumer DN	IEL, acute	inhalation	local	7,2 mg/m³
Consumer DN	IEL, long-term	inhalation	systemic	23,8 mg/m³
Consumer DNEL, long-term		inhalation	local	2,8 mg/m <sup>3</sup>
78-93-3	butanone; ethyl methyl ketone			
Consumer DN	IEL, long-term	oral	systemic	31 mg/kg bw/day
Worker DNEL	., long-term	dermal	systemic	1161 mg/kg bw/day
Consumer DN	IEL, long-term	dermal	systemic	412 mg/kg bw/day
Worker DNEL	., long-term	inhalation	systemic	600 mg/m³
Consumer DN	IEL, long-term	inhalation	systemic	106 mg/m <sup>3</sup>



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#### **PNEC** values

CAS No	Substance				
Environment	al compartment	Value			
64-17-5	ethanol; ethyl alcohol				
Freshwater		0,96 mg/l			
Marine water	r	0,79 mg/l			
Freshwater s	sediment	3,6 mg/kg			
Marine sedin	nent	2,9 mg/kg			
Micro-organia	sms in sewage treatment plants (STP)	580 mg/l			
Soil		0,63 mg/kg			
12125-02-9	ammonium chloride				
Freshwater		0,25 mg/l			
Marine water	r	0,025 mg/l			
Freshwater s	sediment	0,9 mg/kg			
Marine sedin	nent	0,09 mg/kg			
Micro-organia	sms in sewage treatment plants (STP)	13,1 mg/l			
Soil		50,7 mg/kg			
7664-41-7	ammonia, anhydrous				
Freshwater		0,001 mg/l			
Marine water	r	0,001 mg/l			
78-93-3	butanone; ethyl methyl ketone				
Freshwater		55,8 mg/l			
Marine water	55,8 mg/l				
Freshwater sediment 284,7					
Marine sedin	nent	284,7 mg/kg			
Micro-organi	sms in sewage treatment plants (STP)	709 mg/l			
Soil		22,5 mg/kg			

### 8.2. Exposure controls



# Individual protection measures, such as personal protective equipment

#### Eye/face protection

Tight sealing protective goggles (DIN EN 166).

### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.



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# Skin protection

Wear suitable protective clothing.

Respiratory protection No special measures are necessary.

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

9.1. Information on basic physical and che	emical properties	
Physical state:	Liquid	
Colour:	white	
Changes in the physical state		
Melting point/freezing point:	not determin	
Boiling point or initial boiling point and boiling range:	not determin	ied
Flash point:	not determi	ned
Flammability		
Solid/liquid:	not applica	ıble
Gas:	not applica	ıble
Explosive properties The product is not: Explosive.		
Lower explosion limits:	not determin	ned
Upper explosion limits:	not determin	ned
Self-ignition temperature		
Solid:	not applica	
Gas:	not applica	
Decomposition temperature:	not determin	ned
pH-Value (at 25 °C):		9,5
Water solubility:	easily solu	ıble
Solubility in other solvents not determined		
Partition coefficient n-octanol/water:	not determin	ned
Vapour pressure:	not determin	ned
Density:	not determin	ned
Relative vapour density:	not determi	ned
9.2. Other information		
Information with regard to physical haz	zard classes	
Oxidizing properties The product is not: oxidising.		
Other safety characteristics		
Solid content:	not determin	ned
Evaporation rate:	not determin	ned
Further Information		

# **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

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# 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

# 10.4. Conditions to avoid

Protect from frost.

# 10.5. Incompatible materials

Strong acid, Oxidizing agents..

# 10.6. Hazardous decomposition products

In case of heating: development of gaseous ammonia

# **SECTION 11: Toxicological information**

# 11.1. Information on hazard classes as defined in GB CLP Regulation

### Acute toxicity

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

CAS No	Chemical name								
	Exposure route	Dose		Species	Source	Method			
64-17-5	ethanol; ethyl alcohol								
	oral	LD50 mg/kg	10470	Rat	Manufacturer	OECD 401			
	dermal	LD50 mg/kg	> 2000	Rabbit	Manufacturer	OECD 402			
	inhalation (4 h) vapour	LC50	> 20 mg/l	Mouse	Manufacturer	OECD 403			
12125-02-9	ammonium chloride								
	oral	LD50 mg/kg	1410	Rat	Manufacturer				
	dermal	LD50 mg/kg	>2000	Rabbit	Manufacturer				
10361-29-2	ammonium carbonate								
	oral	LD50 mg/kg	500		Manufacturer				
7664-41-7	ammonia, anhydrous								
	oral	LD50 mg/kg	350	Rat	Manufacturer				
	inhalation vapour	ATE	3 mg/l						
	inhalation dust/mist	ATE	0,5 mg/l						
78-93-3	butanone; ethyl methyl k	etone							
	oral	LD50 mg/kg	3300	Rat	Manufacturer				
	dermal	LD50 mg/kg	5000	Rabbit	Manufacturer				
	inhalation (4 h) vapour	LC50	34,5 mg/l	Rat	Manufacturer				
52-51-7	bronopol (INN); 2-bromo	-2-nitropropa	ne-1,3-diol						
	oral	LD50 mg/kg	180	Rat	Manufacturer				
	dermal	LD50 mg/kg	1600	Rat	Manufacturer				
	inhalation vapour	LC50	> 5 mg/l	Rat	Manufacturer				
	inhalation dust/mist	ATE	0,5 mg/l						



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# Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

# Sensitising effects

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

#### Carcinogenic/mutagenic/toxic effects for reproduction

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

#### STOT-single exposure

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

#### STOT-repeated exposure

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

#### Aspiration hazard

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

#### Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

# **SECTION 12: Ecological information**

### 12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method
64-17-5	ethanol; ethyl alcohol						
	Acute fish toxicity	LC50 mg/l	8140	96 h	Leuciscus idus (golden orfe)	Manufacturer	
	Acute algae toxicity	ErC50	275 mg/l	72 h	Chlorella vulgaris	Manufacturer	OECD 201
	Acute crustacea toxicity	EC50 mg/l	> 10000	48 h	Daphnia magna (Big water flea)	Manufacturer	
	Acute bacteria toxicity	(EC50 mg/l)	> 100		Chlorella pyrenoidosa	Manufacturer	OECD 201
12125-02-9	ammonium chloride						
	Acute fish toxicity	LC50 mg/l	42,91	96 h	Oncorhynchus mykiss (Rainbow trout)	Manufacturer	
	Acute crustacea toxicity	EC50 mg/l	136,6	48 h	Daphnia magna (Big water flea)	Manufacturer	
7664-41-7	ammonia, anhydrous						
	Acute crustacea toxicity	EC50 mg/l	25,4	48 h	Daphnia magna (Big water flea)	Manufacturer	
	Crustacea toxicity	NOEC mg/l	0,79	4 d	Daphnia magna (Big water flea)	Manufacturer	
78-93-3	butanone; ethyl methyl ke	tone					
	Acute fish toxicity	LC50 mg/l	> 3000	96 h		Manufacturer	
	Acute crustacea toxicity	EC50 mg/l	1382	48 h	daphnia	Manufacturer	

# 12.2. Persistence and degradability

The product has not been tested.

# 12.3. Bioaccumulative potential

The product has not been tested.



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### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7664-41-7	ammonia, anhydrous	< 1

#### 12.4. Mobility in soil

The product has not been tested.

# 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The product has not been tested.

#### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### 12.7. Other adverse effects

No information available.

#### **Further information**

Avoid release to the environment.

# SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

#### **Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

#### List of Wastes Code - residues/unused products

080299 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of other coatings (including ceramic materials); wastes not otherwise specified

#### List of Wastes Code - used product

080299 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of other coatings (including ceramic materials); wastes not otherwise specified

No dangerous good in sense of this transport regulation.

No dangerous good in sense of this transport regulation.

No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation.

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No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation.

No dangerous good in sense of this transport regulation.

No dangerous good in sense of this transport regulation.

#### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

#### **SECTION 14: Transport information**

#### Land transport (ADR/RID)

 14.1. UN number or ID number:

 14.2. UN proper shipping name:

 14.3. Transport hazard class(es):

 14.4. Packing group:

 Inland waterways transport (ADN)

 14.1. UN number or ID number:

 14.2. UN proper shipping name:

 14.3. Transport hazard class(es):

 14.4. Packing group:

 Marine transport (IMDG)

 14.1. UN number or ID number:

 14.2. UN proper shipping name:

14.2. UN proper shipping name: 14.3. Transport hazard class(es):

14.4. Packing group:



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Air transport (ICAO-TI/IATA-DGR)					
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.				
<u>14.2. UN proper shipping name:</u> 14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation.				
14.4. Packing group:	No dangerous good in sense of this transport regulation.				
14.5. Environmental hazards	···				
ENVIRONMENTALLY HAZARDOUS:	No				
14.6. Special precautions for user					
Warning: strongly corrosive.					
14.7. Maritime transport in bulk according to	o IMO instruments				
not applicable					
SECTION 15: Regulatory information					
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture					
EU regulatory information					
Restrictions on use (REACH, annex XVII):					
Entry 3, Entry 40					
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)				
National regulatory information					
Employment restrictions:	Observe restrictions to employment for juveniles according to the	e 'iuvenile			
	work protection guideline' (94/33/EC).	1			
Water hazard class (D):	1 - slightly hazardous to water				
15.2. Chemical safety assessment					
Chemical safety assessments for subs	tances in this mixture were not carried out.				
SECTION 16: Other information					
Abbreviations and acronyms					
ADR: Accord européen sur le transport des marchandises dangereuses par Route					
(European Agreement concerning the International Carriage of Dangerous Goods by Road)					
IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association					

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration. 50%

LD50: Lethal dose, 50%

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

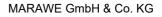
ATE: Acute toxicity estimate

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate





# Safety Data Sheet

according to UK REACH Regulation

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NOEC: No Observed Effect Concentration BCF: Bio-concentration factor PBT: persistent, bioaccumulative, toxic vPvB: very persistent, very bioaccumulative RID: Regulations concerning the international carriage of dangerous goods by rail ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures) EmS: Emergency Schedules MFAG: Medical First Aid Guide ICAO: International Civil Aviation Organization MARPOL: International Convention for the Prevention of Marine Pollution from Ships IBC: Intermediate Bulk Container

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

# Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

### Relevant H and EUH statements (number and full text)

I CI	Activation and Eon statements (number and fair text)				
	H221	Flammable gas.			
	H225	Highly flammable liquid and vapour.			
	H301	Toxic if swallowed.			
	H302	Harmful if swallowed.			
	H312	Harmful in contact with skin.			
	H314	Causes severe skin burns and eye damage.			
	H315	Causes skin irritation.			
	H318	Causes serious eye damage.			
	H319	Causes serious eye irritation.			
	H331	Toxic if inhaled.			
	H335	May cause respiratory irritation.			
	H336	May cause drowsiness or dizziness.			
	H400	Very toxic to aquatic life.			
	H411	Toxic to aquatic life with long lasting effects.			
	EUH066	Repeated exposure may cause skin dryness or cracking.			

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)