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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 09.06.2015 / 0002

Replaces revision of / Version: 07.05.2015 / 0001

Valid from: 09.06.2015 PDF print date: 11.06.2015 Retainant tall 50 ml

Art.: 243441

# Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

# Retainant tall 50 ml

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

Relevant identified uses of the substance or mixture:

Adhesive

Sector of use [SU]:

SU 0 - Other

SU 1 - Agriculture, forestry, fishery SU19 - Building and construction work

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category [PC]:

PC 1 - Adhesives, sealants

Process category [PROC]:

PROC 8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

ERC99 - Not required.

#### Uses advised against:

No information available at present.

# 1.3 Details of the supplier of the safety data sheet

(GB)

Albert Berner Deutschland GmbH, Bernerstrasse 4, 74653 Künzelsau, Germany

Phone: +49 79 40 12 10, Fax: +49 79 40 12 13 00

info@berner.de, www.berner.de

Details of the supplier of the safety data sheet see section 16 of this safety data sheet.

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.



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# 1.4 Emergency telephone number

Emergency information services / official advisory body:

\_\_\_

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (BRC)

#### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
--------------	-----------------	------------------

STOT SE 3 H335-May cause respiratory irritation.

Skin Irrit. 2 H315-Causes skin irritation.

Eye Dam. 1 H318-Causes serious eye damage.

Skin Sens. 1 H317-May cause an allergic skin reaction.

#### 2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

H335-May cause respiratory irritation. H315-Causes skin irritation. H318-Causes serious eye damage. H317-May cause an allergic skin reaction.

P261-Avoid breathing vapours or spray. P280-Wear protective gloves and eye protection/face protection. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310-Immediately call a POISON CENTER/doctor.

hydroxypropyl methacrylate (isomers mixture) Acrylic acid

#### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.



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The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

# REGULATION (EC) No 648/2004

n.a.

# SECTION 3: Composition/information on ingredients

#### 3.1 Substance

# n.a. 3.2 Mixture

hydroxypropyl methacrylate (isomers mixture)	
Registration number (REACH)	
Index	607-125-00-5
EINECS, ELINCS, NLP	248-666-3
CAS	27813-02-1
content %	20-40
Classification according to Regulation (EC)	Eye Irrit. 2, H319
1272/2008 (CLP)	Skin Sens. 1, H317

Acrylic acid	
Registration number (REACH)	
Index	607-061-00-8
EINECS, ELINCS, NLP	201-177-9
CAS	79-10-7
content %	3-<5
Classification according to Regulation (EC)	Flam. Liq. 3, H226
1272/2008 (CLP)	Acute Tox. 4, H332
	Acute Tox. 4, H312
	Acute Tox. 4, H302
	Skin Corr. 1A, H314
	Aquatic Acute 1 H400 (M=1)

alpha-alpha-dimethylbenzyl hydroperoxide	
Registration number (REACH)	
Index	617-002-00-8
EINECS, ELINCS, NLP	201-254-7
CAS	80-15-9
content %	0,1-<1
Classification according to Regulation (EC)	Acute Tox. 3, H331
1272/2008 (CLP)	Acute Tox. 4, H312
	Acute Tox. 4, H302
	STOT RE 2, H373
	Skin Corr. 1B, H314
	Aquatic Chronic 2, H411
	Org. Perox. Type E, Type F, H242

	Substance for which an EU exposure limit value applies.
Registration number (REACH)	



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Index	601-024-00-X
EINECS, ELINCS, NLP	202-704-5
CAS	98-82-8
content %	0,1-<1
Classification according to Regulation (EC)	Flam. Liq. 3, H226
1272/2008 (CLP)	Asp. Tox. 1, H304
	STOT SE 3, H335
	Aquatic Chronic 2, H411

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification! For substances that are listed in appendix VI, table 3.1/3.2 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

#### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

If the person is unconscious, place in a stable side position and consult a doctor.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

#### Eve contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

#### Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

# SECTION 5: Firefighting measures

# 5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media

High volume water jet



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

In case of fire the following can develop:

Oxides of carbon Oxides of nitrogen

Toxic gases

# 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

#### SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping

#### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent from entering drainage system.

If accidental entry into drainage system occurs, inform responsible authorities.

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

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

#### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

#### SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

## 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Ensure good ventilation.

Avoid inhalation of the vapours.

Avoid contact with eyes or skin.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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



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Keep out of access to unauthorised individuals. Store product closed and only in original packing.

Not to be stored in gangways or stair wells.

Under all circumstances prevent penetration into the soil.

Protect from direct sunlight and warming.

Store cool

Store in a dry place.

#### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

# 8.1 Control parameters

Œ	Chemical Name	Cumene			Content %:0,1-<1
1	WEL-TWA: 25 ppm (125	mg/m3)	WEL-STEL:	50 ppm (250 mg/m3)	
(	(WEL), 20 ppm (100 mg/m	3) (EU)	(WEL, EU)		
1	Monitoring procedures:				
E	BMGV:			Other information	n: Sk (WEL)

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

\*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

hydroxypropyl methacrylate (isomers mixture)									
Area of application	Exposure route /	Effect on health Descrip		Value	Unit	Note			
	Environmental		tor						
	compartment								
Workers / employees	Human - dermal	Long term	DNEL	4,2	mg/kg				
Workers / employees	Human - inhalation	Long term	DNEL	14,7	mg/m3				
Consumer	Human - dermal	Long term	DNEL	2,5	mg/kg				
Consumer	Human - inhalation	Long term	DNEL	8,8	mg/m3				
Consumer	Human - oral	Long term	DNEL	2,5	mg/kg				
	Environment -		PNEC	0,904	mg/l				
	freshwater								
	Environment - marine		PNEC	0,904	mg/l				
	Environment -		PNEC	10	mg/l				
	sewage treatment								
	plant								
	Environment -		PNEC	0,972	mg/l				
	sporadic				_				
	(intermittent) release								



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Environment - sediment, freshwater	PNEC	6,28	mg/kg	
Environment -	PNEC	6,28	mg/kg	
sediment, marine				
Environment - soil	PNEC	0,727	mg/kg	

#### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

#### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

#### Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

If applicable

Safety gloves made of natural rubber latex (EN 374).

Protective nitrile gloves (EN 374)

Safety gloves made of butyl (EN 374)

Protective Neoprene® / polychloroprene gloves (EN 374).

Permeation time (penetration time) in minutes:

480

Protective hand cream recommended.

The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)

Respiratory protection:

If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.



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Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

#### 8.2.3 Environmental exposure controls

No information available at present.

# SECTION 9: Physical and chemical properties

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

Physical state:

Colour:

Odour:

Odour threshold:

PH-value:

Melting point/freezing point:

Initial boiling point and boiling range:

Liquid

Green

Characteristic

Not determined

Not determined

Not determined

Flash point: > 90 °C

Evaporation rate: Not determined

Flammability (solid, gas): n.a.

Lower explosive limit:

Upper explosive limit:

Vapour pressure:

Vapour density (air = 1):

Density:

Not determined

Not determined

Not determined

1,07 g/cm3 (25°C)

Bulk density: n.a.

Solubility(ies):
Water solubility:
Not miscible
Partition coefficient (n-octanol/water):
Not determined

Auto-ignition temperature: No

Decomposition temperature: Not determined

Viscosity: 100 - 200 mPas (25°C, Brookfield (2/20))

Explosive properties: Product is not explosive.

Oxidising properties: Not determined

9.2 Other information

Miscibility:

Fat solubility / solvent:

Conductivity:

Not determined

#### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

The product has not been tested.



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#### 10.2 Chemical stability

Stable with proper storage and handling.

# 10.3 Possibility of hazardous reactions

No dangerous reactions are known.

#### 10.4 Conditions to avoid

See also section 7.

Protect from direct sunlight and warming.

#### 10.5 Incompatible materials

See also section 7.

Metal salts

# 10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

# **SECTION 11: Toxicological information**

Possibly more information on health effects, see Section 2.1 (classification).

Toxicity/effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>5000	mg/kg			calculated value
Acute: Acute toxicity, by dermal route:	ATE	>5000	mg/kg			calculated value
Acute toxicity, by Inhalation:	ATE	>20	mg/l/ 4h			calculated value
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.
Other information:						Classification according to calculation procedure.

#### hydroxypropyl methacrylate (isomers mixture)



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Toxicity/effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	-	
Skin corrosion/irritation:				Rabbit	(Draize-Test)	Mild irritant
Skin corrosion/irritation:					OECD 404 (Acute Dermal Irritation/Corrosi on)	Not irritant
Serious eye damage/irritation:				Rabbit	(Draize-Test)	Irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosi on)	Irritant
Respiratory or skin sensitisation:				Human being		Sensitising (skin contact)
Germ cell mutagenicity:				V	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:					OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/De velopm. Tox. Screening Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAE L	300	mg/kg	Rat	22.009 .00()	
Aspiration hazard:						No, Analogous conclusion

Acrylic acid						
Toxicity/effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1300	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	295-750	mg/kg	Rabbit		
Symptoms:						respiratory distress, cornea opacity, coughing, mucous membrane irritation



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alpha-alpha-dimethylbenzyl hydroperoxide							
Toxicity/effect	Endp oint	Value	Unit	Organism	Test method	Notes	
Acute toxicity, by oral route:	LD50	382	mg/kg	Rat			
Acute toxicity, by dermal route:	LD50	500	mg/kg	Rat			
Acute toxicity, by inhalation:	LC50	220	ppm	Rat		(4h)	

Cumene						
Toxicity/effect	Endp oint	Value	Unit	Organism	Test method	Notes
Aspiration hazard:						Yes
Symptoms:						breathing difficulties, respiratory distress, abdominal pain, drowsiness, unconsciousness, diarrhoea, vomiting, coughing, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, watering eyes, nausea and vomiting.

# SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

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Toxicity/effect	Endpoi	Time	Valu	Unit	Organism	Test	Notes
	nt		е			method	
Toxicity to fish:							n.d.a.
Toxicity to							n.d.a.
daphnia:							
Toxicity to algae:							n.d.a.
Persistence and							n.d.a.
degradability:							
Bioaccumulative							n.d.a.
potential:							
Mobility in soil:							n.d.a.



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Results of PBT and vPvB	n.d.a.
assessment	
Other adverse effects:	n.d.a.
Other information:	According to the recipe, contains no AOX.
Other information:	DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.

hydroxypropyl m							
Toxicity/effect	Endpoi	Time	Valu	Unit	Organism	Test	Notes
	nt		е			method	
Toxicity to fish:	LC50	48h	493	mg/l	Leuciscus idus	DIN 38412	
						T.15	
Toxicity to	EC50	48h	380	mg/l	Daphnia	OECD 202	
daphnia:					magna	(Daphnia	
						sp. Acute	
						Immobilisati	
						on Test)	
Toxicity to	NOEC/N	21d	24,1	mg/l	Daphnia	OECD 202	
daphnia:	OEL				magna	(Daphnia	
						sp. Acute	
						Immobilisati	
						on Test)	
Toxicity to algae:	EC50	72h	>97,	mg/l	Pseudokirchn	OECD 201	
			2		eriella	(Alga,	
					subcapitata	Growth	
						Inhibition	
						Test)	
Toxicity to algae:	NOEC/N	72h	97,2	mg/l	Pseudokirchn	OECD 201	
	OEL				eriella	(Alga,	
					subcapitata	Growth	
						Inhibition	
D 11	-	00.1	04.0	07		Test)	Δ 1
Persistence and		28d	94,2	%		OECD 301 E	Anaerobe
degradability:						(Ready	decomposition:,
						Biodegradabi	Readily
						lity -	biodegradable
						Modified	
						OECD	
						Screening	
Bioaccumulative	Log Pow		0,97			Test)	
potential:	LOG POW		0,97				
Results of PBT							No PBT substance,
and vPvB							No vPvB substance,
assessment							IND VEVD SUBSTRICE
assessinell							



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Toxicity to	ECO		>100	mg/l		DIN 38412	
bacteria:						T.27 (Draft)	
Toxicity to	EC10	16h	>114	mg/l	Pseudomonas		
bacteria:			0		putida		
Water solubility:			107	g/l			@25°C

Acrylic acid							
Toxicity/effect	Endpoi nt	Time	Valu e	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	222	mg/l	Brachydanio rerio		
Toxicity to fish:	LC50	96h	27	mg/l	Oncorhynchus mykiss		
Toxicity to fish:	LC50	96h	27	mg/l	Salmo gairdneri		
Toxicity to daphnia:	EC50	48h	47	mg/l	Daphnia magna		
Toxicity to algae:	EC50	72h	0,13	mg/l	Scenedesmus subspicatus		
Persistence and degradability:		28d	81	%			

alpha-alpha-dime	alpha-alpha-dimethylbenzyl hydroperoxide							
Toxicity/effect	Endpoi	Time	Valu	Unit	Organism	Test	Notes	
	nt		е			method		
Toxicity to fish:	LC50	96h	3,9	mg/l	Oncorhynchus	OECD 203		
					mykiss	(Fish, Acute		
						Toxicity		
						Test)		
Toxicity to	EC50	48h	18	mg/l	Daphnia	OECD 202		
daphnia:					magna	(Daphnia		
						sp. Acute		
						Immobilisati		
						on Test)		
Toxicity to algae:	ErC50	72h	3,1	mg/l	Pseudokirchn	OECD 201		
					eriella	(Alga,		
					subcapitata	Growth		
						Inhibition		
						Test)		
Persistence and		28d	3	%		OECD 301 B		
degradability:						(Ready		
						Biodegradabi		
						lity - Co2		
						Evolution		
						Test)		

# **SECTION 13: Disposal considerations**

13.1 Waste treatment methods
For the substance / mixture / residual amounts



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#### EC disposal code no .:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be

allocated under certain circumstances. (2014/955/EU)

08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

# For contaminated packing material

Pay attention to local and national official regulations

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

# SECTION 14: Transport information

#### General statements

UN number: n.a.

Transport by road/by rail (ADR/RID)

UN proper shipping name:

Transport hazard class(es):

Packing group:

Classification code:

LQ (ADR 2015):

n.a.

n.a.

Environmental hazards: Not applicable

Tunnel restriction code:

Transport by sea (IMDG-code)

UN proper shipping name:

Transport hazard class(es): n.a.
Packing group: n.a.
Marine Pollutant: n.a

Environmental hazards: Not applicable

Transport by air (IATA)

UN proper shipping name:

Transport hazard class(es): n.a. Packing group: n.a.

Environmental hazards: Not applicable

Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

Transport in bulk according to Annex II of MARPOL and the IBC Code

Non-dangerous material according to Transport Regulations.

#### **SECTION 15: Regulatory information**

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



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National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

For classification and labelling see Section 2.

Observe restrictions:

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

Directive 2010/75/EU (VOC): ~ 35,14 %

#### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

#### SECTION 16: Other information

Revised sections:

n.a.

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
STOT SE 3, H335	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Eye Dam. 1, H318	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H314 Causes severe skin burns and eye damage.

H242 Heating may cause a fire.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.



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H411 Toxic to aquatic life with long lasting effects.

STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

Skin Irrit. — Skin irritation

Eye Dam. — Serious eye damage Skin Sens. — Skin sensitization Eye Irrit. — Eye irritation

Flam. Liq. — Flammable liquid

Acute Tox. — Acute toxicity - inhalation Acute Tox. — Acute toxicity - dermal Acute Tox. — Acute toxicity - oral Skin Corr. — Skin corrosion

Aquatic Acute — Hazardous to the aquatic environment - acute STOT RE — Specific target organ toxicity - repeated exposure Aquatic Chronic — Hazardous to the aquatic environment - chronic

Org. Perox. — Organic peroxide Asp. Tox. — Aspiration hazard

Albert Berner Deutschland GmbH

Bernerstrasse 4 D - 74653 Künzelsau Tel +49 79 40 12 10 Fax +49 79 40 12 13 00

info@berner.de www.berner.de Berner Gesellschaft m.b.H. Industriezeile 36

A - 5280 Braunau / Inn Tel +43 77 22 800 508 Fax +43 77 22 800 184 berner@berner.co.at

www.berner.co.at

Montagetechnik Berner AG

Kägenstraße 8

CH - 4153 Reinach / Bl. 1 Tel +41 61 71 59 222 Fax +41 61 71 59 333 berner-ag@berner-ag.ch www.berner-ag.ch

Berner A/S Stenholm 2

DK - 9400 Nørresundby Tel +45 99 36 15 00 Fax +45 98 19 24 14 info@berner.dk www.berner.dk

Berner Kft. Táblás u. 34

H - 1097 Budapest Tel +36 (1) 347 1059 Fax +36 (1) 347 1045

info@berner.hu www.berner.hu

Frimann-Berner AS Holmaveien 25 N - 1339 Vøyenenga Tel +47 66 76 55 80 Fax +47 66 76 55 81

info@berner.no www.berner.no

Berner Belgien NV/SA Bernerstraat 1

B - 3620 Lanaken

Tel +31 45 533 93 133(8.00h-16.00h)

Tel +31 6 290 27 464 (16.00h-8.00h)

Fax +31 455 33 92 43 info@berner.be

www.berner.be

Berner Montaje y Fijación, S.L.

P.I. "La Rosa VI" C/Albert Berner, 2

E - 18330 Chauchina-Granada-

España

Tel +34 90 21 03 504 Fax +34 90 21 13 190 berner-spain@berner.es

www.berner.es

Berner Succ. Luxembourg 105, Rue des Bruyères

L - 1274 Howald

Tel +31 45 533 93 133 (8.00h-

16.00h)

Tel +31 6 290 27 464 (16.00h-

8.00h)

Fax +31 455 33 92 43

info@berner.lu www.berner.lu



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Art.: 243441

Berner spol. s r.o. Jinonická 80 CZ - 158 00 Praha 5 Tel +420 225 390 666 Fax +420 225 390 660 berner@berner.cz www.berner.cz

Albert Berner UAB Kalvarijø 29B, LT09313, Vilnius, Lithuania Tel +370-52104355 Fax +370-52350020 info@berner.lt

Berner Pultti Oy Volttikatu 6 FI - 70700 Kuopio Tel +358-207-590 220 Fax +358-207-590 221 kuopio@berner-pultti.com www.berner-pultti.com

Berner Endüstriyel Ürünler Sanayi ve Ticaret A.Ţ. Ferhatpaţa Mah. G 7 Sok. 31/2 TR - 34858 Kartal-Samandýra / ÝSTANBUL Tel +90 (0) 216-4713077 Fax +90 (0) 216-4719625 info@berner.com.tr

Berner Produkten b.v. Vogelzankweg 175 NL - 6374 AC Landgraaf +31 45 53 39 133 (8.00h-16.00h) +31 6 290 27 464 (16.00h-8.00h) info@berner.nl www.berner.nl

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Av. Amália Rodrigues,3510
Manique de Baixo
P - 2785-738 São Domingos de Rana
Tel ++351 21 448 90 60
Fax ++351 21 448 90 69
marketing.pt@berner.pt
www.berner.pt

Berner SK Berner s r.o. Jesenského 1 SK - 962 12 Detva Tel (+421) 45 5410 245 Fax (+421) 45 5410 255 berner@berner.sk www.berner.sk

Mitras d.o.o Brdnikova ulica 34e SL-1000 Ljubljana Tel +386-1-256-62-46 Fax +386-1-256-62-45 mitras@siol.com

Berner S.p.A. Via dell 'Elettronica 15 I - 37139 Verona Tel +39 04 58 67 01 11 Fax +39 04 58 67 01 34 info@berner.it www.berner.it

Berner s.a.r.l.
ZI Les Manteaux
F - 89331 Saint-Julien-du-Sault Cedex
Tel +33 38 69 94 400
Fax +33 38 69 94 444
contact@berner.fr
www.berner.fr

Berner Polska Sp. Z.o.o.
Al. Gen. T. Bora-Komorowskiego 25a
PL - 31-476 Kraków
Tel +48 12 297 62 40
Fax +48 12 297 62 02
office@berner.pl
www.berner.pl

Albert Berner Montageteknik AB Elektravägen 53 S - 126 30 Hägersten Tel +46 85 78 77 800 Fax +46 85 78 77 805 info@berner.se www.berner.se

BERNER d.o.o CPM Savěca Śanci Trgovaćka 2 HR - 10000 Zagreb Tel +38512 499 470 Fax +38512 499 480

e-mail: safetydata-hr@berner.co.at

Albert Berner srl Str. Vrancei Nr. 51 - 55 RO - 310315 Arad Tel +40 257 212291 Fax +40 257 250460 office@berner-romania.ro www.berner-romania.ro

Albert Berner SIA Liliju 20, Marupe, Mārupes novads, LV-2167, Latvija Tel +37167840007 Fax +371678440008 info@berner.lv



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# Any abbreviations and acronyms used in this document:

AC Article Categories

acc., acc. to according, according to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (=

European Agreement concerning the International Carriage of Dangerous Goods by Road)

**AOEL Acceptable Operator Exposure Level** 

AOX Adsorbable organic halogen compounds

approx. approximately Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

CAS Chemical Abstracts Service

CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids

CESIOComité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

COD Chemical oxygen demand

CTFA Cosmetic, Toiletry, and Fragrance Association

DMEL Derived Minimum Effect Level

**DNEL Derived No Effect Level** 

DOC Dissolved organic carbon

DT50 Dwell Time - 50% reduction of start concentration

DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community

ECHA European Chemicals Agency

EEA European Economic Area

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

**EN** European Norms

EPA United States Environmental Protection Agency (United States of America)

**ERC** Environmental Release Categories



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ES Exposure scenario

etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

**HGWP Halocarbon Global Warming Potential** 

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

LC lethal concentration

LC50 lethal concentration 50 percent kill LCLo lowest published lethal concentration

LD Lethal Dose of a chemical LD50 Lethal Dose, 50% kill

LOAELLowest Observed Adverse Effect Level LOEC Lowest Observed Effect Concentration

LOEL Lowest Observed Effect Level

LQ Limited Quantities

LDLo Lethal Dose Low

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicablen.av. not availablen.c. not checkedn.d.a. no data available

NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAEC No Observed Adverse Effective Concentration

NOAEL No Observed Adverse Effect Level

NOEC No Observed Effect Concentration

NOEL No Observed Effect Level ODP Ozone Depletion Potential

OECD Organisation for Economic Co-operation and Development

org. organic

PAH polycyclic aromatic hydrocarbon PBT persistent, bioaccumulative and toxic

PC Chemical product category

PE Polyethylene

PNEC Predicted No Effect Concentration POCP Photochemical ozone creation potential

ppm parts per million PROC Process category PTFE Polytetrafluorethylene

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)



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RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern

Tel. Telephone

ThOD Theoretical oxygen demand

TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization

wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are

not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.