

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830



POXYCON A

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

1.1. Product identifier

Product name : POXYCON A
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Epoxy resin

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
☎ +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
☎ +32 14 85 97 38
info@tec7.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Skin Irrit.	category 2	H315: Causes skin irritation.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
Aquatic Chronic	category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements



Contains: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700); formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol; [[(2-ethylhexyl)oxy]methyl]oxirane.

Signal word Warning

H-statements

H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

P-statements

P280 Wear protective gloves, protective clothing and eye protection/face protection.

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)

Technische Schoolstraat 43 A, B-2440 Geel

<http://www.big.be>

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P264	Wash hands thoroughly after handling.
P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
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.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) 01-2119456619-26	25068-38-6 500-033-5	60%<C<80%	Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	(1)(8)(10)	Constituent
formaldehyde, oligomeric reaction products with 1- chloro-2,3-epoxypropane and phenol 01-2119454392-40	9003-36-5 500-006-8	10%<C<20%	Skin Sens. 1; H317 Skin Irrit. 2; H315 Aquatic Chronic 2; H411	(1)(10)	Constituent
benzyl alcohol 01-2119492630-38	100-51-6 202-859-9	5%<C<10%	Acute Tox. 4; H332 Acute Tox. 4; H302	(1)(2)(10)	Constituent
[[[2-ethylhexyl]oxy]methyl]oxirane	2461-15-6 219-553-6	1%<C<2.5%	Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 3; H412	(1)(10)	Constituent

(1) For H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

(8) Specific concentration limits, see heading 16

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

No effects known.

After skin contact:

Tingling/irritation of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.
Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, carbon monoxide - carbon dioxide). May polymerize on exposure to temperature rise.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Face-shield. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Face-shield. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product. Dam up the solid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material, e.g.: sand. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with a soap solution. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Do not discharge the waste into the drain. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Ventilation at floor level. Protect against frost. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, oxidizing agents.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

Germany

Benzylalkohol	Time-weighted average exposure limit 8 h (TRGS 900)	5 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	22 mg/m ³

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

Product name	Test	Number
Benzyl Alcohol	OSHA	2009

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	12.25 mg/m ³	
	Acute systemic effects inhalation	12.25 mg/m ³	
	Long-term systemic effects dermal	8.33 mg/kg bw/day	
	Acute systemic effects dermal	8.33 mg/kg bw/day	

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	29.39 mg/m ³	
	Long-term systemic effects dermal	104.15 mg/kg bw/day	
DMEL	Acute local effects dermal	8.3 µg/cm ²	

benzyl alcohol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	22 mg/m ³	
	Acute systemic effects inhalation	110 mg/m ³	
	Long-term systemic effects dermal	8 mg/kg bw/day	
	Acute systemic effects dermal	40 mg/kg bw/day	

DNEL/DMEL - General population

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	3.571 mg/kg bw/day	
	Acute systemic effects dermal	3.571 mg/kg bw/day	
	Long-term systemic effects oral	0.75 mg/kg bw/day	
	Acute systemic effects oral	0.75 mg/kg bw/day	

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	8.7 mg/m ³	
	Long-term systemic effects dermal	62.5 mg/kg bw/day	
	Long-term systemic effects oral	6.25 mg/kg bw/day	

benzyl alcohol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	5.4 mg/m ³	
	Acute systemic effects inhalation	27 mg/m ³	
	Long-term systemic effects dermal	4 mg/kg bw/day	
	Acute systemic effects dermal	20 mg/kg bw/day	
	Long-term systemic effects oral	4 mg/kg bw/day	
	Acute systemic effects oral	20 mg/kg bw/day	

PNEC

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Compartments	Value	Remark
Fresh water	0.006 mg/l	
Marine water	0.001 mg/l	
Aqua (intermittent releases)	0.018 mg/l	
STP	10 mg/l	
Fresh water sediment	0.996 mg/kg sediment dw	
Marine water sediment	0.1 mg/kg sediment dw	
Soil	0.196 mg/kg soil dw	
Oral	11 mg/kg food	

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formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Compartments	Value	Remark
Fresh water	0.003 mg/l	
Marine water	0.0003 mg/l	
Aqua (intermittent releases)	0.0254 mg/l	
STP	10 mg/l	
Fresh water sediment	0.294 mg/kg sediment dw	
Marine water sediment	0.0294 mg/kg sediment dw	
Soil	0.237 mg/kg soil dw	

benzyl alcohol

Compartments	Value	Remark
Fresh water	1 mg/l	
Marine water	0.1 mg/l	
Aqua (intermittent releases)	2.3 mg/l	
STP	39 mg/l	
Fresh water sediment	5.27 mg/kg sediment dw	
Marine water sediment	0.527 mg/kg sediment dw	
Soil	0.456 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Gloves.

- materials (good resistance)

Nitrile rubber.

c) Eye protection:

Safety glasses.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Characteristic odour Mild odour
Odour threshold	No data available
Colour	Colourless
Particle size	Not applicable (liquid)
Explosion limits	No data available
Flammability	Non-flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	950 mPa.s ; 20 °C
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	> 100 °C
Evaporation rate	No data available
Relative vapour density	> 2
Vapour pressure	No data available
Solubility	Water ; insoluble
Relative density	1.2 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	435 °C
Flash point	100 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties

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pH No data available

9.2. Other information

Absolute density 1160 kg/m³ ; 20 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Temperature above flashpoint: higher fire/explosion hazard.

10.2. Chemical stability

Unstable on exposure to heat.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 420	> 2000 mg/kg		Rat (female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg	24 h	Rat (male/female)	Experimental value	
Inhalation (vapours)	LC0		0.000008 ppm	5 h	Rat (male)	Experimental value	

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 5000 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 2000 mg/kg bw	24 h	Rat (male/female)	Experimental value	
Inhalation						Data waiving	

benzyl alcohol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		1620 mg/kg bw/day		Rat (male)	Experimental value	
Dermal	LD50		> 2000 mg/kg		Rabbit	Inconclusive, insufficient data	
Inhalation (aerosol)	LC50	OECD 403	> 4.178 mg/l air	4 h	Rat (male/female)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

POXYCON A

No (test)data on the mixture available

Classification is based on the relevant ingredients

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reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating				Rabbit	Experimental value	
Skin	Irritating				Rabbit	Experimental value	

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	
Skin	Slightly irritating	Equivalent to OECD 404	4 h	4; 24; 48; 72 hours	Rabbit	Experimental value	

benzyl alcohol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405	24 h	24; 48; 72 hours	Rat	Experimental value	
Skin	Slightly irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

Classification of this substance is debatable as it does not correspond to the conclusion from the test

[[2-ethylhexyl]oxy]methyl]oxirane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating; category 2					Literature study	
Skin	Irritating; category 2					Literature study	

Conclusion

Causes skin irritation.
Causes serious eye irritation.

Respiratory or skin sensitisation

POXYCON A

No (test)data on the mixture available

Classification is based on the relevant ingredients

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal (on the ears)	Sensitizing	OECD 429			Mouse (female)	Experimental value	

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 429			Mouse (female)	Experimental value	

benzyl alcohol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Human observation			Human (male/female)	Experimental value	

[[2-ethylhexyl]oxy]methyl]oxirane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing; category 1					Literature study	

Conclusion

May cause an allergic skin reaction.

Specific target organ toxicity

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No (test)data on the mixture available

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reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	50 mg/kg bw/day		No effect	14 weeks (daily)	Rat (male/female)	Experimental value
Dermal	NOAEL	OECD 411	100 mg/kg bw/day		No adverse systemic effects	13 weeks (3 times/week)	Mouse (male)	Experimental value

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	250 mg/kg bw/day		No effect	13 weeks (daily)	Rat (male/female)	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

benzyl alcohol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Equivalent to OECD 451	400 mg/kg bw/day		No effect	103 weeks (5 days/week)	Rat (male/female)	Experimental value
Dermal								Data waiving
Inhalation (aerosol)	NOAEC	OECD 412	1072 mg/m ³ air		No effect	4 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

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No (test) data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 472	Bacteria (S.typhimurium)	No effect	Experimental value
Positive with metabolic activation, positive without metabolic activation		Mouse (lymphoma L5178Y cells)		Experimental value

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Result	Method	Test substrate	Effect	Value determination
Positive with metabolic activation, positive without metabolic activation	OECD 473	Human lymphocytes		Experimental value
Positive with metabolic activation	OECD 471	Bacteria (S.typhimurium)		Experimental value

benzyl alcohol

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Mutagenicity (in vivo)

POXYCON A

No (test) data on the mixture available

Judgement is based on the relevant ingredients

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Chromosome aberration assay		Mouse (male)		Experimental value

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474	2 day(s)	Mouse (male/female)	Bone marrow	Experimental value

benzyl alcohol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 474	24 h	Mouse (male)	Bone marrow	Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (stomach tube)	NOAEL	OECD 453	15 mg/kg/d - 100 mg/kg/d	104 weeks (daily)	Rat (male/female)	No carcinogenic effect		Experimental value

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Dermal	NOAEL	Carcinogenic toxicity study	> 800 mg/kg bw/day	104 weeks (2 times/week)	Mouse (male/female)	No carcinogenic effect		Experimental value

benzyl alcohol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	NOAEL	Equivalent to OECD 451	400 mg/kg bw/day	103 weeks (5 days/week)	Rat (male/female)	No carcinogenic effect		Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

POXYCON A

No (test)data on the mixture available

Judgement is based on the relevant ingredients

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	> 540 mg/kg/d	10 days (gestation, daily)	Rat (female)	No effect	Foetus	Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	180 mg/kg bw/day	10 days (gestation, daily)	Rat (female)	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOEL	OECD 416	750 mg/kg bw/day	238 day(s)	Rat (male/female)	No effect		Experimental value

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	180 mg/kg bw/day	13 day(s)	Rabbit	No effect	Foetus	Read-across
Maternal toxicity	NOAEL	OECD 414	60 mg/kg bw/day	13 day(s)	Rabbit	No effect	General	Experimental value
Effects on fertility	NOEL	OECD 416	750 mg/kg bw/day	238 day(s)	Rat (male/female)	No effect		Read-across

benzyl alcohol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL		550 mg/kg bw/day	10 days (gestation, daily)	Mouse	No effect	Foetus	Experimental value
Maternal toxicity	LOAEL		550 mg/kg bw/day	10 days (gestation, daily)	Mouse	Maternal toxicity		Experimental value
Effects on fertility	NOAEL		800 mg/kg bw/day	13 weeks (5 days/week)	Rat (male/female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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No (test)data on the mixture available

Chronic effects from short and long-term exposure

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ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

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SECTION 12: Ecological information

12.1. Toxicity

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No (test) data on the mixture available

Classification is based on the relevant ingredients

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.3 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	Equivalent to OECD 202	1.1 mg/l - 2.8 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	EPA 660/3 - 75/009	> 11 mg/l	72 h	Scenedesmus sp.	Static system	Fresh water	Experimental value
	NOEC	EPA 660/3 - 75/009	4.2 mg/l	72 h	Scenedesmus sp.	Static system	Fresh water	Experimental value
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	Equivalent to OECD 211	0.3 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	IC50		> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; Nominal concentration

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	1.9 mg/l	96 h	Brachydanio rerio	Semi-static system	Fresh water	Weight of evidence
Acute toxicity crustacea	EC50	OECD 202	3.5 mg/l	48 h	Daphnia magna	Static system	Fresh water	Weight of evidence; GLP
Toxicity algae and other aquatic plants	EC50	Equivalent to OECD 201	> 1.8 mg/l	72 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value
Long-term toxicity aquatic crustacea	NOEC	Equivalent to OECD 211	0.3 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
	LOEC	Equivalent to OECD 211	1 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	IC50		> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

benzyl alcohol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA OPP 72-1	460 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	230 mg/l	48 h	Daphnia magna		Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	ErC50	OECD 201	770 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEC	OECD 211	51 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP

Conclusion

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

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reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	5 %; Oxygen consumption	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.91	6.44 h	500000 /cm ³	Calculated value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111: Hydrolysis as a function of pH	86 h; pH = 7		Experimental value

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Biodegradation water

Method	Value	Duration	Value determination
EU Method C.4	0 %	28 day(s)	Experimental value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111: Hydrolysis as a function of pH	86 h; pH = 7		Read-across

benzyl alcohol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	92 % - 96 %	14 day(s)	Experimental value

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		31; Fresh weight			Estimated value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.64 - 3.78	25 °C	Experimental value

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		150		Pisces	QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.7 - 3.6		Experimental value

benzyl alcohol

Log Kow

Method	Remark	Value	Temperature	Value determination
		1 - 1.1	20 °C	Experimental value

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

12.4. Mobility in soil

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	2.65	QSAR

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	0 %		1.9 %	84.3 %	13.8 %	Calculated value

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formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

(log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	3.65	Experimental value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
9.6E-7 Pa.m ³ /mol				QSAR

Conclusion

Contains component(s) with potential for mobility in the soil
Contains component(s) that adsorb(s) into the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

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Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of substances which may contribute to the greenhouse effect (IPCC)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 01 11* (wastes from MFSU and removal of paint and varnish: waste paint and varnish containing organic solvents or other hazardous substances).

Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Recycle/reuse. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste.

Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	3082
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14.2. UN proper shipping name

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))
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14.3. Transport hazard class(es)

Hazard identification number	90
Class	9
Classification code	M6

14.4. Packing group

Packing group	III
Labels	9

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

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Rail (RID)

14.1. UN number	UN number	3082
14.2. UN proper shipping name	Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))
14.3. Transport hazard class(es)	Hazard identification number	90
	Class	9
	Classification code	M6
14.4. Packing group	Packing group	III
	Labels	9
14.5. Environmental hazards	Environmentally hazardous substance mark	yes
14.6. Special precautions for user	Special provisions	274
	Special provisions	335
	Special provisions	375
	Special provisions	601
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number	UN number	3082
14.2. UN proper shipping name	Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))
14.3. Transport hazard class(es)	Class	9
	Classification code	M6
14.4. Packing group	Packing group	III
	Labels	9
14.5. Environmental hazards	Environmentally hazardous substance mark	yes
14.6. Special precautions for user	Special provisions	274
	Special provisions	335
	Special provisions	375
	Special provisions	601
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number	UN number	3082
14.2. UN proper shipping name	Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))
14.3. Transport hazard class(es)	Class	9
14.4. Packing group	Packing group	III
	Labels	9
14.5. Environmental hazards	Marine pollutant	P
	Environmentally hazardous substance mark	yes
14.6. Special precautions for user	Special provisions	274
	Special provisions	335
	Special provisions	969
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code		

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Annex II of MARPOL 73/78	Not applicable, based on available data
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Air (ICAO-TI/IATA-DGR)

14.1. UN number	UN number	3082
14.2. UN proper shipping name	Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))
14.3. Transport hazard class(es)	Class	9
14.4. Packing group	Packing group	III
	Labels	9
14.5. Environmental hazards	Environmentally hazardous substance mark	yes
14.6. Special precautions for user	Special provisions	A97
	Special provisions	A158
	Special provisions	A197
	Limited quantities: maximum net quantity per packaging	30 kg G

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
8.09 %	

European drinking water standards (Directive 98/83/EC)

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Parameter	Parametric value	Note	Reference
Epichlorohydrin	0,1 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
<ul style="list-style-type: none"> · reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) · formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol · benzyl alcohol · [[(2-ethylhexyl)oxy]methyl]oxirane 	<p>Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:</p> <p>(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;</p> <p>(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;</p> <p>(c) hazard class 4.1;</p> <p>(d) hazard class 5.1.</p>	<p>1. Shall not be used in:</p> <ul style="list-style-type: none"> — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, <p>2. Articles not complying with paragraph 1 shall not be placed on the market.</p> <p>3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:</p> <ul style="list-style-type: none"> — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304, <p>4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).</p> <p>5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:</p> <ul style="list-style-type: none"> a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. <p>6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.</p> <p>7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or</p>

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H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'

National legislation Belgium

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No data available

National legislation The Netherlands

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Waterbezwaarlijkheid	A (2)
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National legislation France

POXYCON A

No data available

National legislation Germany

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WGK	2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4) and Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) of 18 April 2017
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reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

TA-Luft	5.2.5; I
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formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

TA-Luft	5.2.5; I
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benzyl alcohol

TA-Luft	5.2.5
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TRGS900 - Risiko der Fruchtschädigung	Benzylalkohol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
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Hautresorptive Stoffe	Benzylalkohol; H; Hautresorptiv
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National legislation United Kingdom

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No data available

Other relevant data

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No data available

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H-statements referred to under heading 3:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

(*) INTERNAL CLASSIFICATION BY BIG

CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

Specific concentration limits CLP

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	C \geq 5%	Eye Irrit. 2; H319	CLP Annex VI (ATP 0)
	C \geq 5%	Skin Irrit. 2; H315	CLP Annex VI (ATP 0)

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The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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