SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

NOVA WET STICK

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

1.1. Product identifier

Product name : NOVA WET STICK
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@novatech.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 3	H412: Harmful to aquatic life with long lasting effects.

2.2. Label elements

Contains: poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether; reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700); triethylenetetramine.

Signal word Warning

H-statements

H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

P-statements

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

Supplemental information

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

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	M-factors and ATE
poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, ether with 2,2-bis (hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether	72244-98-5	25% ≤C≤50%	Skin Sens. 1B; H317 Aquatic Chronic 3; H412	(1)(V)	Constituent	
glass, oxide, chemicals	65997-17-3 266-046-0	25% ≤C≤50%		(2)	Constituent	
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) 01-2119456619-26	25068-38-6 500-033-5	C≤10%	Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 2; H411 Eye Irrit. 2; H319: C≥5%, (CLP Annex VI (ATP 0)) Skin Irrit. 2; H315: C≥5%, (CLP Annex VI (ATP 0))	(1)(10)	Constituent	
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] 01-2119489379-17	13463-67-7 236-675-5	C≤10%	Carc. 2; H351	(1)(2)	Constituent	
triethylenetetramine	112-24-3 203-950-6	C<1%	Skin Sens. 1; H317 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	(1)(10)	Constituent	
phenol 01-2119471329-32	108-95-2 203-632-7	C≤0.3%	Muta. 2; H341 Acute Tox. 3; H331 Acute Tox. 3; H311 Acute Tox. 3; H301 STOT RE 2; H373 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 2; H411	(1)(2)(6)(10)	Constituent	

(1) For H- and EUH-statements in full: see section 16
(2) Substance with a Community workplace exposure limit
(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006
(V) Exempted from registration under REACH (Regulation (EC) No 1907/2006, article 2 (9), polymers)

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

After inhalation:

Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

After ingestion:
Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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.

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 (nitrous vapours, hydrogen chloride, sulphur oxides, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

5.3.1 Instructions:
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 (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

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 section 8.2

6.1.2 Protective equipment for emergency responders
Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing
See section 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

Solid spill: cover with absorbent material. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See section 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. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:
Meet the legal requirements. Store in a dry area. Keep container in a well-ventilated place. Keep only in the original container. Keep out of direct sunlight.

7.2.2 Keep away from:
Heat sources.

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.

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.

EU

Phenol	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	2 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	8 mg/m³
	Short time value (Indicative occupational exposure limit value)	4 ppm
	Short time value (Indicative occupational exposure limit value)	16 mg/m³

Belgium

Phénol	Time-weighted average exposure limit 8 h	2 ppm
	Time-weighted average exposure limit 8 h	8 mg/m³
	Short time value	4 ppm
	Short time value	16 mg/m³
Titane (dioxyde de)	Time-weighted average exposure limit 8 h	10 mg/m³
Verres (fibres ou poussières de)	Time-weighted average exposure limit 8 h	10 mg/m³

The Netherlands

Fenol	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	2 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	8 mg/m³

France

Fibres de verre	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	1 fibers/cm³
Phénol	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	2 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	7.8 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	4 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	15.6 mg/m³
Titane (dioxyde de), en Ti	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m³

Germany

Phenol	Time-weighted average exposure limit 8 h (TRGS 900)	2 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	8 mg/m³

Austria

Phenol	Tagesmittelwert (MAK)	2 ppm
	Tagesmittelwert (MAK)	8 mg/m³
	Kurzzeitwert 15(Miw) 4x (MAK)	4 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	16 mg/m³
Titandioxid (Alveolarstaub)	Tagesmittelwert (MAK)	5 mg/m³
	Kurzzeitwert 60(Miw) 2x (MAK)	10 mg/m³

UK

MMMF (Machine-made mineral fibre) (except for refraction ceramic fibres and special purpose fibres)	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	2 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	5 mg/m³

Phenol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	2 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	7.8 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	4 ppm
	Short time value (Workplace exposure limit (EH40/2005))	16 mg/m³
Titanium dioxide respirable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m³
Titanium dioxide total inhalable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m³

USA (TLV-ACGIH)

Phenol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	5 ppm
Synthetic vitreous fibers: Continuous filam glass fibers	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	1 fibers/cm³ (F)
	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	5 mg/m³ (I)
Synthetic vitreous fibers: Glass wool fibers	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	1 fibers/cm³ (F)
Titanium dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	10 mg/m³

(F): Respirable fibers: length > 5 µm; aspect ratio ≥ 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination
(I): Inhalable fraction

b) National biological limit values

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

Germany

Phenol (Phenol (nach Hydrolyse))	Urin: expositionsende, bzw. schichtende	120 mg/g Kreatinin	

USA (BEI-ACGIH)

Methemoglobin inducers (Methemoglobin)	Blood: during or end of shift	5 % of hemoglobin	Background, Nonspecific
Phenol (Phenol)	urine: end of shift	250 mg/g creatinine	Background, Nonspecific, With hydrolysis

8.1.2 Sampling methods

Product name	Test	Number
Asbestos and other fibers by PCM	NIOSH	7400
carbolic acid	NIOSH	3502
Phenol (Cresols)	NIOSH	2546
Phenol (Volatile Organic compounds)	NIOSH	2549
phenol	NIOSH	8305
phenol	OSHA	32
TiO2	NIOSH	7302
TiO2	NIOSH	7304
Triethylene Tetramine	OSHA	60
triethylenetetramine	NIOSH	2540-1
triethylenetetramine	NIOSH	2540-2
triethylenetetramine	NIOSH	2540-teta

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 Threshold values

DNEL/DMEL - Workers

phenol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	8 mg/m³	
	Acute local effects inhalation	16 mg/m³	
	Long-term systemic effects dermal	1.23 mg/kg bw/day	

DNEL/DMEL - General population

phenol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1.32 mg/m³	
	Long-term systemic effects dermal	0.4 mg/kg bw/day	
	Long-term systemic effects oral	0.4 mg/kg bw/day	

PNEC

glass, oxide, chemicals

Compartments	Value	Remark
Fresh water	6.5 µg/l	
Marine water	3.4 µg/l	
STP	100 µg/l	
Fresh water sediment	174 mg/kg sediment dw	
Marine water sediment	164 mg/kg sediment dw	
Soil	147 mg/kg soil dw	
Oral	10.9 mg/kg food	

phenol

Compartments	Value	Remark
Fresh water	0.008 mg/l	
Marine water	0.001 mg/l	
Fresh water (intermittent releases)	0.031 mg/l	
STP	2.1 mg/l	
Fresh water sediment	0.091 mg/kg sediment dw	
Marine water sediment	0.009 mg/kg sediment dw	
Soil	0.136 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:

Mist formation: aerosol mask with filter type P3.

b) Hand protection:

Protective gloves against chemicals (EN 374).

c) Eye protection:

Safety glasses (EN 166).

d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Paste
Viscosity	Viscous
Odour	Almost odourless
Odour threshold	No data available in the literature
Colour	Green to white
Particle size	No data available in the literature
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available in the literature
Kinematic viscosity	No data available in the literature
Melting point	No data available in the literature
Boiling point	> 35 °C
Relative vapour density	No data available in the literature
Vapour pressure	No data available in the literature
Solubility	Water ; insoluble
Relative density	2.00 ; 20 °C
Absolute density	2000 kg/m³ ; 20 °C
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	> 100 °C ; Closed cup
pH	Not applicable (non-soluble in water)

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire hazard.

10.2. Chemical stability

Stable under normal conditions.

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

No data available.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

11.1.1 Test results

Acute toxicity

NOVA WET STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal						Data waiving	
Inhalation (dust)	LC50	OECD 403	> 5.09 mg/l	4 h	Rat (male)	Experimental value	

triethylenetetramine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	BASF test	1716 mg/kg bw		Rat	Experimental value	
Dermal	LD50	BASF test	1465 mg/kg bw		Rabbit	Experimental value	

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

phenol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	340 mg/kg bw - 540 mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	660 mg/kg bw	24 h	Rat (female)	Experimental value	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	0.9 mg/l	8 h	Rat (female)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

NOVA WET STICK

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)

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

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

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

triethylenetetramine

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	OECD 405			Rabbit	Experimental value	
Skin	Corrosive	OECD 404			Rabbit	Experimental value	

phenol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	Equivalent to OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment without rinsing
Not applicable (in vitro test)	Corrosive	OECD 431	3 minutes		Reconstructed human epidermis	Experimental value	

Conclusion

Causes skin irritation.
Causes serious eye irritation.
Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

NOVA WET STICK

No (test)data on the mixture available

Classification is based on the relevant ingredients

poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether

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

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

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

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 429			Mouse (female)	Experimental value	
Inhalation (dust)	Not sensitizing				Mouse (female)	Experimental value	

triethylenetetramine

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406			Guinea pig	Experimental value	

phenol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406			Guinea pig (female)	Experimental value	

Conclusion

May cause an allergic skin reaction.
Not classified as sensitizing for inhalation

Specific target organ toxicity

NOVA WET STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	> 1000 mg/kg bw/day		No effect	90 day(s)	Rat (male / female)	Experimental value
Dermal								Data waiving

phenol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	Equivalent to OECD 408	71 mg/kg bw/day		No effect	13 week(s)	Rat (male)	Experimental value
Oral (drinking water)	LOAEL	Equivalent to OECD 408	300 mg/kg bw/day		Reduced food consumption	13 week(s)	Rat (male)	Experimental value
Dermal	NOAEL	Subacute toxicity test	130 mg/kg bw/day		No adverse systemic effects	18 days (5h / day)	Rabbit	Experimental value
Dermal	LOAEL	Subacute toxicity test	260 mg/kg bw/day		Systemic effects	18 days (5h / day)	Rabbit	Experimental value
Inhalation (vapours)	NOAEC	Equivalent to OECD 412	25 ppm		No effect	2 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

NOVA WET STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 473	Chinese hamster ovary (CHO)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)		Experimental value	

triethylenetetramine

Result	Method	Test substrate	Effect	Value determination	Remark
Positive	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	
Negative	Equivalent to OECD 487	Chinese hamster ovary (CHO)		Experimental value	

phenol

Result	Method	Test substrate	Effect	Value determination	Remark
Negative without metabolic activation, positive with metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	
Positive with metabolic activation, positive without metabolic activation	Equivalent to OECD 487	Chinese hamster ovary (CHO)		Experimental value	

Mutagenicity (in vivo)

NOVA WET STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	OECD 474		Mouse (male / female)		Experimental value

phenol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Positive (Intraperitoneal)	Equivalent to OECD 474		Mouse (male / female)	Bone marrow	Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

NOVA WET STICK

No (test)data on the mixture available

The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (aerosol)		Equivalent to OECD 453		105 weeks (6h / day, 5 days / week)	Rat (male)	Lung tissue affection/degeneration	Lungs	Experimental value
Inhalation (aerosol)	NOAEC	Equivalent to OECD 453	5 mg/m³ air	104 weeks (6h / day, 5 days / week)	Rat (male / female)	No carcinogenic effect	Lungs	Experimental value
Oral (diet)	NOEL	Carcinogenic toxicity study	50000 ppm	103 weeks (7 days / week)	Rat (male / female)	No carcinogenic effect		Experimental value

triethylenetetramine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Dermal		Carcinogenic toxicity study		104 weeks (3 times / week)	Mouse (male)			Experimental value

phenol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (drinking water)	NOAEL	Equivalent to OECD 451	5000 ppm	103 week(s)	Rat (male / female)	No carcinogenic effect		Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

NOVA WET STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	2 weeks (7 days / week)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	2 weeks (7 days / week)	Rat	No effect		Experimental value
Effects on fertility (Oral (diet))	NOAEL	OECD 443	≥ 1000 mg/kg bw/day	14 day(s)	Rat (male / female)	No effect		Experimental value

triethylenetetramine

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Effects on fertility	NOAEL		125 mg/kg bw	6 days (gestation, daily) - 18 days (gestation, daily)	Rabbit (female)	Maternal toxicity		Experimental value

phenol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	140 mg/kg bw/day	11 days (gestation, daily)	Mouse	Degeneration of heart tissue		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	140 mg/kg bw/day	11 days (gestation, daily)	Mouse	No effect		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL	Equivalent to OECD 416	71 mg/kg bw/day - 93 mg/kg bw/day		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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Skin rash/inflammation.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

NOVA WET STICK

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		1.3 mg/l	96 h	Pisces			Literature study
Acute toxicity crustacea	EC50	OECD 202	2 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EC50	EPA 660/3 - 75/009	9.4 mg/l	72 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value; Biomass
Long-term toxicity aquatic crustacea	NOEC		0.3 mg/l	21 day(s)	Daphnia sp.			Literature study

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		> 1000 mg/l		Pisces		Fresh water	
Acute toxicity crustacea	EC50		> 1000 mg/l		Invertebrata		Fresh water	
Toxicity algae and other aquatic plants	EC50	OECD 201	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
	NOEC	OECD 201	≥ 100 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate

triethylenetetramine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		495 mg/l	96 h	Pimephales promelas		Fresh water	Literature study
Acute toxicity crustacea	EC50	Equivalent to OECD 202	31.1 mg/l	48 h	Daphnia magna			Literature study
Toxicity aquatic micro-organisms	EC0		500 mg/l	24 h	Pseudomonas fluorescens			Literature study

phenol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	US EPA	8.9 mg/l	96 h	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	US EPA	3.1 mg/l	48 h	Ceriodaphnia dubia	Static system	Fresh water	Experimental value; Locomotor effect
Long-term toxicity fish	NOEC		0.077 mg/l	60 day(s)	Cirrhinus mrigala	Semi-static system	Fresh water	Experimental value; Weight changes

Conclusion

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

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

Biodegradation water

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

triethylenetetramine

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D	0 %	20 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	0.553 h	1.5E6 /cm³	Calculated value

phenol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C	62 %; Oxygen consumption	100 h	Experimental value

Conclusion

Water

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)			

poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

glass, oxide, chemicals

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available in the literature			

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

Log Kow

Method	Remark	Value	Temperature	Value determination
		3	25 °C	Estimated value

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

triethylenetetramine

Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		-2.65		Estimated value

phenol

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	17.5; Fresh weight	5 h	Danio rerio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		1.47	30 °C	Experimental value

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

triethylenetetramine

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	1.885	Calculated value

phenol

(log) Koc

Parameter	Method	Value	Value determination
Koc	OECD 121	14 - 73	Experimental value
log Koc		1.15 - 1.86	Calculated value

Conclusion

Contains component(s) with potential for mobility in 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. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

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Greenhouse gases

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)

triethylenetetramine
Groundwater
Groundwater pollutant
Water ecotoxicity pH
pH shift

phenol
Groundwater
Groundwater pollutant

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 04 09* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants 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

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. Dispose of at authorized waste collection point.

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), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

14.7. Maritime transport in bulk according to IMO instruments

Annex II of MARPOL 73/78	Not applicable, based on available data

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
< 1 %	
< 20 g/l	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC, 2004/37/EC and amendments)

phenol

Product name	Skin resorption
Phenol	Skin

European drinking water standards (98/83/EC and 2020/2184)

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

Parameter	Parametric value	Note	Reference
Epichlorohydrin	0.1 µg/l		Listed in Annex I, Part B, of Directive (EU) 2020/2184 on the quality of water intended for human consumption.
Bisphenol A	2.5 µg/l		Listed in Annex I, Part B, of Directive (EU) 2020/2184 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
· reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) · triethylenetetramine	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (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; (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; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — 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, 2. Articles not complying with paragraph 1 shall not be placed on the market. 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: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 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). 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: a) lamp oils, labelled with 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 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 H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
· reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) · triethylenetetramine · phenol	Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081

National legislation Belgium

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No data available

phenol

Résorption peau	Phénol; D; La mention “D” signifie que la résorption de l’agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l’exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l’agent dans l’air.

National legislation The Netherlands

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Waterbezwaarlijkheid	A (3); Algemene Beoordelingsmethodiek (ABM)

phenol

Huidopname (wettelijk)	Fenol; H

National legislation France

NOVA WET STICK

No data available

glass, oxide, chemicals

Catégorie cancérogène	Fibres de verre

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Catégorie cancérogène	Titane (dioxyde de), en Ti; C2

phenol

Catégorie mutagène	Phénol; M2
Risque de pénétration percutanée	Phénol; Risque de pénétration percutanée

National legislation Germany

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WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017

poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether

TA-Luft	5.2.5

glass, oxide, chemicals

TA-Luft	5.2.1

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

TA-Luft	5.2.5/I

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

TA-Luft	5.2.1

triethylenetetramine

TA-Luft	5.2.5/I

phenol

TA-Luft	5.2.5/I
Hautresorptive Stoffe	Phenol; H; Hautresorptiv

National legislation Austria

NOVA WET STICK

No data available

phenol

besondere Gefahr der Hautresorption	Phenol; H

National legislation United Kingdom

NOVA WET STICK

No data available

phenol

Skin absorption	Phenol; Sk

Other relevant data

NOVA WET STICK

No data available

glass, oxide, chemicals

TLV - Carcinogen	Synthetic vitreous fibers: Glass wool fibers; A3
	Synthetic vitreous fibers: Continuous filam glass fibers; A4
	Synthetic vitreous fibers: Continuous filam glass fibers; A4

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

TLV - Carcinogen	Titanium dioxide; A4
IARC - classification	2B; Titanium dioxide

phenol

IARC - classification	3; Phenol
TLV - Skin absorption	Phenol; Skin; Danger of cutaneous absorption
TLV - Carcinogen	Phenol; A4

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer if inhaled.
H373 May cause damage to organs (skin, liver, kidneys, nervous system) through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
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

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. 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.