SAFETY DATA SHEET



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

NOVA TITAN STICK

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

1.1. Product identifier

Product name : NOVA TITAN 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

2 +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

2 +32 14 85 97 37

4 +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

Classified as dariger	lassified as daligerous according to the criteria of negalation (EC) NO 1272/2000				
Class	Category	lazard statements			
Skin Sens.	category 1	H317: May cause an allergic skin reaction.			
Eye Dam.	category 1	H318: Causes serious eye damage.			
Skin Irrit.	category 2	H315: Causes skin irritation.			
Aquatic Chronic	category 2	H411: Toxic to aquatic life with long lasting effects.			

2.2. Label elements

Signal word

H-statements





Danger



Contains: bis-[4-(2,3-epoxipropoxi)phenyl]propane; reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700); fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines; formaldehyde/aniline, polymer, hydrogenated; triethylenetetramine.

May cause an allergic skin reaction.
Causes serious eye damage.
Causes skin irritation.
Toxic to aquatic life with long lasting effects.
Wear protective gloves, protective clothing and eye protection/face protection.

P264 Wash hands thoroughly after handling.

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG) Technische Schoolstraat 43 A, B-2440 Geel

http://www.big.be

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P302 + P352 IF ON SKIN: Wash with plenty of water and soap.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P391 Collect spillage.

2.3. Other hazards

Caution! Substance is absorbed through the skin

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
Talc (Mg3H2(SiO3)4)	14807-96-6 238-877-9	25% ≤C≤50%		(2)	Constituent	
bis-[4-(2,3-epoxipropoxi)phenyl]propane 01-2119456619-26	1675-54-3 216-823-5	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)(6)(10)	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	
fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines	68410-23-1	C<10%	Skin Sens. 1A; H317 Eye Dam. 1; H318 Skin Irrit. 2; H315 Aquatic Chronic 2; H411	(1)	Constituent	
zinc sulphide	1314-98-3 215-251-3	C<10%			Constituent	
formaldehyde/aniline, polymer, hydrogenated	135108-88-2	C<1%	Acute Tox. 3; H301 Skin Sens. 1; H317 STOT RE 2; H373 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	(1)(10)	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)(2)(10)	Constituent	

⁽¹⁾ For H- and EUH-statements in full: see section 16

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.

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⁽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

After eye contact:

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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:

Tingling/irritation of the skin.

After skin contact:

No effects known.

After eye contact:

Corrosion 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. Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows. Exposure to fire/heat: consider evacuation.

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.

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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 cool area. Keep out of direct sunlight. Store in a dry area. Keep container in a well-ventilated place. Keep only in the original container.

7.2.2 Keep away from:

Heat sources, oxidizing agents, reducing agents, (strong) bases.

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.

Talc (sans fibre d'amiante)	Time-weighted average exposure limit 8 h	2 mg/m³
The Netherlands		
Talk (respirabel)	Time-weighted average exposure limit 8 h (Public occupation: limit value)	al exposure 0.016 ppm (1)
	Time-weighted average exposure limit 8 h (Public occupation: limit value)	al exposure 0.25 mg/m³ (1)
(1) respirabel	•	•

Germany

Germany			
Bisphenol-A-diglycidylether	vgl. Abschn. IIb		
Triethylentetramin	Der Stoff kann gleichzeitig als Dampf und Aerosol vorliegen.		
Zink und seine anorganischen Verbindungen (alveolengängige Fraktion)	Time-weighted average exposure limit 8 h (MAK)	0.1 mg/m³ (1)	
Zink und seine anorganischen Verbindungen (einatembare Fraktion)	Time-weighted average exposure limit 8 h (MAK)	2 mg/m³ (2)	

- (1) Alveolengängige Fraktion
- (2) Einatembare Fraktion

Austria

Talk (asbestfaserfrei)	Tagesmittelwert (MAK)	2 mg/m³ (1)
(1) Alveolengängige Fraktion		

UK

Talc, respirable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit	1 mg/m³
	(EH40/2005))	
•		•

USA (TLV-ACGIH)

Talc: Containing asbestos fibers	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.1 fibers/cm³ (1)
Talc: Containing no asbestos fibers	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	2 mg/m³ (2)

^{(1) (}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

(2) R,E: Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica

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
Diglycidyl Ether of Bisphenol A	OSHA	1018
Triethylene Tetramine	OSHA	60
triethylenetetramine	NIOSH	2540-1
triethylenetetramine	NIOSH	2540-2

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Product name	Test	Number
triethylenetetramine	NIOSH	2540-teta
Zinc & Cpds (as Zn)	NIOSH	7030

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 Talc (Mg3H2(SiO3)4)

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL Long-term systemic effects inhalation		2.16 mg/m ³	
	Acute systemic effects inhalation	2.16 mg/m ³	
	Long-term local effects inhalation	3.6 mg/m³	
	Acute local effects inhalation	3.6 mg/m ³	
	Long-term systemic effects dermal	43.2 mg/kg bw/day	
	Long-term local effects dermal	4.54 mg/cm ²	

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	4.93 mg/m³	
	Long-term systemic effects dermal	0.75 mg/kg bw/day	

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	3.9 mg/m ³	
	Long-term systemic effects dermal	1.1 mg/m³	

zinc sulphide

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	5 mg/m³	
	Long-term systemic effects dermal	83 mg/kg bw/day	

formaldehyde/aniline, polymer, hydrogenated

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	0.2 mg/m ³	
	Acute systemic effects inhalation	2 mg/m³	
	Long-term systemic effects dermal	2 mg/kg bw/day	
	Acute systemic effects dermal	6 mg/kg bw/day	

<u>DNEL/DMEL - General population</u> Talc (Mg3H2(SiO3)4)

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	1.08 mg/m ³	
	Acute systemic effects inhalation	1.08 mg/m ³	
	Long-term local effects inhalation	1.8 mg/m³	
	Acute local effects inhalation	1.8 mg/m³	
	Long-term systemic effects dermal	21.6 mg/kg bw/day	
	Long-term local effects dermal	2.27 mg/kg bw/day	
	Long-term systemic effects oral	160 mg/kg bw/day	
	Acute systemic effects oral	160 mg/kg bw/day	

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	0.87 mg/m³	
	Long-term systemic effects dermal	89.3 μg/kg bw/day	
	Long-term systemic effects oral	0.5 mg/kg bw/day	

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL Long-term systemic effects inhalation (0.97 mg/m³	
	Long-term systemic effects dermal	0.56 mg/m³	
	Long-term systemic effects oral	0.56 mg/m³	

zinc sulphide

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	2.5 mg/m³	
	Long-term systemic effects dermal	83 mg/kg bw/day	
	Long-term systemic effects oral	0.83 mg/kg bw/day	

PNEC

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Talc (Mg3H2(SiO3)4)

Compartments	Value	Remark
Fresh water	597.97 mg/l	
Fresh water (intermittent releases)	597.97 mg/l	
Marine water	141.26 mg/l	
Marine water (intermittent releases)	141.26 mg/l	
Fresh water sediment	31.33 mg/kg sediment dw	
Marine water sediment	3.13 mg/kg sediment dw	
Air	10 mg/m ³	

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Compartments	Value	Remark
Fresh water	0.006 mg/l	
Marine water	0.001 mg/l	
Fresh water (intermittent releases)	0.018 mg/l	
Marine water (intermittent releases)	0.002 mg/l	
STP	10 mg/l	
Fresh water sediment	0.341 mg/kg sediment dw	
Marine water sediment	0.034 mg/kg sediment dw	
Soil	0.065 mg/kg soil dw	
Oral	11 mg/kg food	

zinc sulphide

Compartments	Value	Remark
Fresh water	20.6 μg/l	
Marine water	6.1 μg/l	
STP	100 μg/l	
Fresh water sediment	117.8 mg/kg sediment dw	
Marine water sediment	56.5 mg/kg sediment dw	
Soil	35.6 mg/kg soil dw	

formaldehyde/aniline, polymer, hydrogenated

Compartments	Value	Remark
Fresh water	0.015 mg/l	
Fresh water (intermittent releases)	0.15 mg/l	
Marine water	0.002 mg/l	
STP	1.9 mg/l	
Fresh water sediment	15 mg/kg sediment dw	
Marine water sediment	1.5 mg/kg sediment dw	
Soil	1.8 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:

Respiratory protection not required in normal conditions.

b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Measured breakthrough time	Thickness	Protection index	Remark
nitrile rubber	> 60 minutes		Class 3	
viton	> 240 minutes		Class 5	

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
Colour	Brown
Odour	Almost odourless

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Odour threshold	No data available in the literature
Melting point	No data available in the literature
Boiling point	> 35 °C
Flammability	Not classified as flammable
Explosion limits	No data available in the literature
Flash point	> 100 °C ; Closed cup
Auto-ignition temperature	No data available in the literature
Decomposition temperature	No data available in the literature
рН	Not applicable (non-soluble in water)
Kinematic viscosity	No data available in the literature
Solubility	Water ; insoluble
Log Kow	Not applicable (mixture)
Vapour pressure	No data available in the literature
Absolute density	1900 kg/m³ ; 20 °C
Relative density	1.90 ; 20 °C
Relative vapour density	No data available in the literature
Particle size	No data available

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

Reacts violently with (strong) oxidizers and with (strong) reducers.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents, reducing agents, (strong) bases.

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 TITAN STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Talc (Mg3H2(SiO3)4)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	OECD 423	> 5000 mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Inhalation (aerosol)	LC50	OECD 403	> 2.1 mg/l		Rat (male / female)		(maximum achievable concentration)

bis-[4-(2,3-epoxipropoxi)phenyl]propane

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

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Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 423	> 2000 mg/kg bw		Rat (female)	Experimental value	
Skin	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation						Data waiving	
sulphide							
Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 5000 mg/kg		Rat (male / female)	Read-across	
Dermal						Data waiving	
Inhalation (dust)	LC50	OECD 403	> 5.41 mg/l	4 h	Rat (male / female)	Read-across	
naldehyde/aniline, p	olymer, hydro	<u>genated</u>					
Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 423	50 mg/kg bw - 300 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50	Equivalent to EPA OPP 81-2	> 1000 mg/kg bw	24 h	Rabbit (male / female)	Experimental value	
Inhalation						Data waiving	

Conclusion

Dermal

Not classified for acute toxicity

Route of exposure

Corrosion/irritation

NOVA TITAN STICK

No (test)data on the mixture available

Classification is based on the relevant ingredients

Parameter

Method

Value

category 4

Talc (Mg3H2(SiO3)4)

Route of exposure	Result	Method	Exposure time	Time point		Value determination	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	•	Single treatment without rinsing
Not applicable (in vitro test)		EU Method B.46				Experimental value	

Exposure time

Species

Value

Annex VI

determination

Remark

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Route of exposure	Result	Method	Exposure time	Time point	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hrs; 7 days	Experimental value	Single exposure
Eye	Irritating; category 2				Annex VI	
Skin	Slightly irritating	OECD 404	4 h	24; 48; 72 hours	Experimental value	
Skin	Irritating; category 2				Annex VI	

 $\underline{reaction\ product:\ bisphenol-A-(epichlorhydrin)\ epoxy\ resin\ (number\ average\ molecular\ weight\ \le 700)}$

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

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

Route of exposure	Result	Method	Exposure time	Time point	- •	Value determination	Remark
Eye	Serious eye damage	OECD 405		24; 48; 72 hrs; 21 days	Rabbit		Single treatment without rinsing
Not applicable (in vitro test)	Not corrosive	OECD 431	3 minutes - 60 minutes			Experimental value	
Not applicable (in vitro test)	Irritating	OECD 439	1 h	42 hours	Reconstructed human epidermis	Read-across	

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zinc sulphide

	Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
							determination	
	Eye	Slightly irritating	EU Method B.5	24 h	1; 24; 48; 72 hours	Rabbit		Single treatment with rinsing
	Skin	Not irritating	Patch test	5 day(s)		Rabbit	Read-across	
fo	maldehyde/aniline,	polymer, hydrogena	ited					

Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
						determination	
Eye						Data waiving	
Not applicable (in	Corrosive;	OECD 435	109 year(s)			Experimental	
vitro test)	category 1C					value	

triethylenetetramine

Route of exposure	Result	Method	Exposure time	Time point	 Value determination	Remark
Eye	Serious eye damage; category 1				Annex VI	
Skin	Corrosive; category 1B				Annex VI	

Conclusion

Causes skin irritation.

Causes serious eye damage.

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

NOVA TITAN STICK

No (test)data on the mixture available

Classification is based on the relevant ingredients Talc (Mg3H2(SiO3)4)

Route of exposure	Result	Method	•	Observation time point	Species	Value determination I	Remark
Skin	Not sensitizing	OECD 406			Guinea pig (female)	Experimental value	
Inhalation	Not sensitizing				Rat (male)	Experimental value	

bis-[4-(2,3-epoxipropoxi)phenyl]propane

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

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

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

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

	Route of exposure	Result	Method	-	Observation time point	Species	Value determination	Remark
	Dermal (on the	Sensitizing	OECD 429		-	Mouse (female)	Experimental value	
	ears)							
<u>zi</u>	nc sulphide							

Route of exposure	Result	Method	•	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406			Guinea pig (female)	Read-across	

formaldehyde/aniline, polymer, hydrogenated

Route of exposure	Result	Method	 Observation time point	Species	Value determination	Remark
Skin	0	Equivalent to OECD 406		1 1 0	Experimental value of similar product	

triethylenetetramine

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

Conclusion

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

Specific target organ toxicity

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15 Publication date: 2001-07-03 Date of revision: 2023-11-22

Revision number: 1000 BIG number: 35912 9 / 20

NOVA TITAN STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Talc (Mg3H2(SiO3)4)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time		Value determination
Oral (diet)	NOAEL	Equivalent to OECD 452	100 mg/kg bw/day		No effect	101 day(s)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation (aerosol)	NOAEC	Equivalent to OECD 452	10.8 mg/m³ air			, , ,	Rat (male / female)	Experimental value

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value
								determination
Oral (stomach	NOAEL	OECD 408	50 mg/kg		No effect	14 weeks (7 days /	Rat (male /	Experimental
tube)			bw/day			week)	female)	value
Dermal	NOAEL	OECD 411	100 mg/kg		No adverse	13 weeks (3 times /	Mouse (male)	Experimental
	systemic		bw/day		systemic	week)		value
	effects				effects			

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	 Value determination
Inhalation			STOT SE cat.3				Annex VI

zinc sulphide

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time		Value determination
Oral (diet)	NOAEL		13.26 mg/kg bw/day		No effect	` '	Rat (male / female)	Read-across

formaldehyde/aniline, polymer, hydrogenated

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time		Value determination
Oral (stomach tube)	NOAEL	OECD 407	15 mg/kg bw/day		No effect	> 28 day(s)	, ,	Experimental value
Oral (stomach tube)	Dose level	OECD 407	150 mg/kg bw/day	l '	Impairment/d egeneration	> 28 day(s)	` '	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

NOVA TITAN STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Talc (Mg3H2(SiO3)4)

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	
activation, negative					
without metabolic					
activation					

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic	OECD 472	Escherichia coli		Experimental value	
activation, negative					
without metabolic					
activation					

zinc sulphide

Result	Method	Test substrate	Effect	Value determination	Remark
· ·	Equivalent to OECD 471	Bacteria (S.typhimurium)		Read-across	
activation, negative					
without metabolic					
activation					
Negative with metabolic	OECD 481	Yeast (S. cerevisiae)		Read-across	
activation, negative					
without metabolic					
activation					

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15 Publication date: 2001-07-03

Date of revision: 2023-11-22

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formaldehyde/aniline, polymer, hydrogenated

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 473	CHL/IU cells		Experimental value	

Mutagenicity (in vivo)

NOVA TITAN STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Talc (Mg3H2(SiO3)4)

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	Equivalent to OECD	5 days (1x / day)	Rat (male)		Experimental value
	478				

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	OECD 488	4 weeks (daily)	Rat (male)		Experimental value

$\underline{\textbf{Conclusion}}$

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

NOVA TITAN STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Talc (Mg3H2(SiO3)4)

Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
exposure								
Inhalation (aerosol)	NOAEC	OECD 453	<u>.</u>	113 weeks (6h / day, 5 days / week) - 122 weeks (6h / day, 5 days / week)	, ,	No carcinogenic effect		Experimental value
Oral (diet)	NOAEL	OECD 453	100 mg/kg bw/day	101 day(s)	Rat (male / female)	No carcinogenic effect		Experimental value

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
exposure								
Dermal	NOEL	OECD 453	100 mg/kg bw/day	104 weeks (5 days / week)	Rat (female)	No carcinogenic effect		Experimental value
Oral (stomach tube)	NOAEL		15 mg/kg bw/day - 100 mg/kg bw/day	104 week(s)	Rat (male / female)	No carcinogenic effect		Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

NOVA TITAN STICK

No (test)data on the mixture available

Judgement is based on the relevant ingredients Talc (Mg3H2(SiO3)4)

	Parameter	Method	Value	Exposure time	Species	Effect	- 0	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	Developmenta I toxicity study	0, 0	10 days (1x / day)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	Developmenta I toxicity study		10 days (1x / day)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	Equivalent to OECD 416	> 900 mg/kg bw/day	13 days (1x / day)	Rabbit (female)	No effect		Experimental value

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15 Publication date: 2001-07-03 Date of revision: 2023-11-22

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bis-[4-(2,3-epoxipropoxi)phenyl]propane

	Parameter	Method	Value	Exposure time	Species	Effect	- 0	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	180 mg/kg bw/day	13 days (gestation, daily)	Rabbit	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	60 mg/kg bw/day	13 days (gestation, daily)	Rabbit	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

zinc sulphide

	Parameter	Method	Value	Exposure time	Species	Effect	- 0-	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	Developmenta I toxicity study	0, 0	10 days (gestation, daily)	Rat	No effect		Read-across
Maternal toxicity (Oral (stomach tube))	NOAEL	Developmenta I toxicity study	O, O	10 days (gestation, daily)	Rat	No effect		Read-across
Effects on fertility (Oral (diet))	Dose level		4000 ppm	30 day(s) - 32 day (s)	Rat (male)	Reduction in sperm motility	Male reproductive organ	Read-across

formaldehyde/aniline, polymer, hydrogenated

	Parameter	Method	Value	Exposure time	Species	Effect		Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	> 280 mg/kg bw/day	15 days (gestation, daily)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	> 280 mg/kg bw/day	15 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	OECD 421	280 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Aspiration hazard

<u>NOVA TITAN STICK</u>

Judgement is based on the relevant ingredients Not classified for aspiration toxicity

Toxicity other effects

NOVA TITAN STICK

No (test)data on the mixture available

Chronic effects from short and long-term exposure

NOVA TITAN STICK

Skin rash/inflammation.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

NOVA TITAN STICK

No (test)data on the mixture available

Classification is based on the relevant ingredients

Talc (Mg3H2(SiO3)4)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	ECOSAR v1.00	89581 mg/l	96 h	Pisces		Fresh water	QSAR
Acute toxicity crustacea	LC50	ECOSAR v1.00	36812 mg/l	48 h	Daphnia sp.		Fresh water	QSAR
Toxicity algae and other aquatic plants	EC50	ECOSAR v1.00	7203 mg/l	96 h	Algae		Fresh water	QSAR
	NOEC	ECOSAR v1.00	918 mg/l	30 day(s)	Algae		Fresh water	QSAR
Long-term toxicity fish	NOEC	ECOSAR v1.00	5980 mg/l	30 day(s)	Pisces		Fresh water	QSAR
Long-term toxicity aquatic crustacea	NOEC	ECOSAR v1.00	1460 mg/l	30 day(s)	Daphnia sp.		Fresh water	QSAR

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15

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	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determinatio
Acute toxicity fishes	LC50	OECD 203	1.8 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Experimental value, Nominal concentration
Acute toxicity crustacea	EC50	Equivalent to OECD 202	1.7 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value Locomotor effect
Toxicity algae and other aquatic plants	EC50	EPA 660/3 - 75/009	> 11 mg/l	72 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value Growth rate
	NOEC	EPA 660/3 - 75/009	4.2 mg/l	72 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value Growth rate
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
Toxicity aquatic micro- organisms	IC50		> 100 mg/l	3 h	Activated sludge	,		Experimental value Respiration
eaction product: bisphenol-A-(epichlorhydrin)	epoxy resin (nui	nber average	molecular we	ight ≤ 700)			nespiration.
	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
atty acids, C18-unsaturated, di	mers, reaction p	roducts with po	lyethylenepol	lyamines				
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	7.07 mg/l	96 h	Danio rerio	Semi-static system	Fresh water	Read-across; GLP
Acute toxicity crustacea	EC50	OECD 202	5.18 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	4.11 mg/l	72 h	Pseudokirchneri ella subcapitata	Static system	Fresh water	Experimental value Growth rate
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea								Data waiving
nc sulphide								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 0.25 mg/l	96 h	Danio rerio	Static system	Fresh water	Experimental value GLP
Acute toxicity crustacea	LC50	OECD 202	> 29 µg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value GLP
Toxicity algae and other aquatic plants	ErC50	OECD 201	> 13 µg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value GLP
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea								Data waiving
Toxicity aquatic micro- organisms								Data waiving
ormaldehyde/aniline, polymer,								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	63 mg/l	96 h	Poecilia reticulata	Static system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	OECD 202	15.4 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	EU Method C.3	43.94 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value
	EC10	EU Method C.3	1.2 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value
Toxicity aquatic micro- organisms	EC50	EU Method C.11	186.7 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

Conclusion

organisms

Toxic to aquatic life with long lasting effects.

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15 Publication date: 2001-07-03

C.11

Date of revision: 2023-11-22

system

Revision number: 1000 BIG number: 35912 13 / 20

12.2. Persistence and degradability

Talc (Mg3H2(SiO3)4)

Phototransformation air (D	T50 air)
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Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	18.602 h	1.5E6 /cm ³	QSAR

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Biodegradation water

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

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

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D	15 %; Oxygen consumption	28 day(s)	Experimental value

zinc sulphide

Biodegradation water

Method	Value	Duration	Value determination
			Data waiving

Half-life water (t1/2 water)

Method	Primary degradation/mineralisation	Value determination
		Data waiving

formaldehyde/aniline, polymer, hydrogenated

Biodegradation water

Method	Value	Duration	Value determination
Other	0 %	28 day(s)	Experimental value

Conclusion

Water

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

NOVA TITAN STICK

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

Talc (Mg3H2(SiO3)4)

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		3.162 l/kg			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (inorganic)			

bis-[4-(2,3-epoxipropoxi)phenyl]propane

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		31; Fresh weight			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.6 - 3.8	25 °C	Experimental value
		1 1 1 1 1 1	700	-

 $\underline{\text{reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight } \leq 700)$

Log Kow

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

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.01	70.8 l/kg - 492 l/kg;			QSAR
	1	Fresh weight			

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		10 4 - 4 66	25 °C	Experimental value

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15

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Date of revision: 2023-11-22

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zinc sulphide

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		38 - 28960; Fresh	28 day(s)	Palaemon elegans	Experimental value
		weight			

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable			

formaldehyde/aniline, polymer, hydrogenated

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305C	18 - 22	18 week(s)	Cyprinus carpio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8			21 °C	Experimental value

triethylenetetramine

Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		-2.65		Estimated value

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

Talc (Mg3H2(SiO3)4)

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	0 %	0 %	39.3 %	56 %	4.72 %	QSAR

bis-[4-(2,3-epoxipropoxi)phenyl]propane

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	2.7	QSAR

fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines

(log) Koc

	Parameter	Method	Value	Value determination
	log Koc	SRC PCKOCWIN v2.0	4.934 - 9.909	Calculated value
zine	<u>c sulphide</u>			

(log) Koc

Parameter	Method	Value	Value determination
			Data waiving

formaldehyde/aniline, polymer, hydrogenated

(log) Koc

•	Parameter	Method	Value	Value determination
	log Koc	Equivalent to OECD 121	2.919 - 4.204	Experimental value

triethylenetetramine

(log) Koc

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

Conclusion

Contains component(s) that adsorb(s) into the soil

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

NOVA TITAN STICK

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)

Groundwater

Groundwater pollutant

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15

Publication date: 2001-07-03

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Talc (Mg3H2(SiO3)4)

Water ecotoxicity pH

pH shift

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Groundwater

Groundwater pollutant

zinc sulphide

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

Not classified as hazardous waste when part A and part B are mixed and are fully cured. 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. Contains an organic halogen which may add to the AOX value.

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

. <u>1. UN number</u>	
UN number	3077
2. UN proper shipping name	
Proper shipping name	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane)
3. Transport hazard class(es)	·
Hazard identification number	90
Class	9
Classification code	M7
4. Packing group	
Packing group	III
Labels	9
5. Environmental hazards	
Environmentally hazardous substance mark	yes
. <u>6. Special precautions for user</u>	
Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg (gross mass).
Specific mention	Within the meaning of the packing requirements this substance is considered as a liquid

Rail (RID)

14.	1. UN number				
	UN number	3077			
14.2. UN proper shipping name					
		environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3- epoxipropoxi)phenyl]propane)			
14.	.3. Transport hazard class(es)				
	Hazard identification number	90			
	Class	٥			

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15 Publication date: 2001-07-03

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Date of revision: 2023-11-22

Classification code	M7
4. Packing group	
Packing group	III
Labels	9
5. Environmental hazards	
Environmentally hazardous substance mark	yes
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 kg per inner packaging for solids. A package shall not weigh more than 30 kg (gross mass).
Specific mention	Within the meaning of the packing requirements this substance is considered as a liquid
d waterways (ADN)	
1. UN number/ID number	2077
UN number/ID number	3077
2. UN proper shipping name	
Proper shipping name	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane)
3. Transport hazard class(es)	
Class	9
Classification code	M7
4. Packing group	
Packing group	III
Labels	9
5. Environmental hazards	
Environmentally hazardous substance mark	yes
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 kg per inner packaging for solids. A package shall not weigh more than 30 kg (gross mass).
Specific mention	Within the meaning of the packing requirements this substance is considered as a liquid
	oonstacted as a riquid
MDG/IMSBC)	
MDG/IMSBC) 1. UN number	
	3077
1. UN number	3077
1. UN number UN number	T
UN number UN number UN proper shipping name	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3
1. UN number UN number 2. UN proper shipping name Proper shipping name	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3
UN number UN number UN proper shipping name Proper shipping name Transport hazard class(es)	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane)
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane)
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane)
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9 P yes
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9 P yes 274 335
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions Special provisions Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9 P yes 274 335 966
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions Special provisions Special provisions Special provisions Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9 P yes 274 335 966 967
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9 P yes 274 335 966 967 969
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions Special provisions Special provisions Special provisions Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9 P yes 274 335 966 967 969 Combination packagings: not more than 5 kg per inner packaging for
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) III
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) III
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions Limited quantities	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) III
1. UN number UN number 2. UN proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) III
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions Analytime transport in bulk according to IMO instruments Annex II of MARPOL 73/78 CAO-TI/IATA-DGR)	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) III
1. UN number UN number 2. UN proper shipping name Proper shipping name Proper shipping name 3. Transport hazard class(es) Class 4. Packing group Packing group Labels 5. Environmental hazards Marine pollutant Environmentally hazardous substance mark 6. Special precautions for user Special provisions The provisions Special provisions Special provisions Special provisions Special provisions Special provisions Special provisions Annex II of MARPOL 73/78	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane) 9 III 9 P yes 274 335 966 967 969 Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg (gross mass). Within the meaning of the packing requirements this substance is considered as a liquid

Reason for revision: 2; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 15

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Proper shipping name	environmentally hazardous substance, solid, n.o.s. (bis-[4-(2,3 epoxipropoxi)phenyl]propane)
14.3. Transport hazard class(es)	
Class	9
L4.4. Packing group	
Packing group	III
Labels	9
14. <u>5. Environmental hazards</u>	
Environmentally hazardous substance mark	yes
14. <u>6. Special precautions for user</u>	
Special provisions	A158
Special provisions	A179
Special provisions	A197
Special provisions	A215
Special provisions	A97
Specific mention	Within the meaning of the packing requirements this substance is considered as a liquid
Passenger and cargo transport	
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
< 1 %	
< 19 g/l	

Directive 2012/18/EU (Seveso III)

Threshold values under normal circumstances

		Top tier (tonnes)		For this substance or mixture the summation rule has to be applied for:
E2 Hazardous to the Aquatic Environment in Category Chronic 2	200	500	None	Eco-toxicity

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

 $\underline{reaction\ product:\ bisphenol-A-(epichlorhydrin)\ epoxy\ resin\ (number\ average\ molecular\ weight\ \le\ 700)}$

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
bis-[4-(2,3-epoxipropoxi)phenyl]propane reaction product: bisphenol-A- (epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) formaldehyde/aniline, polymer, hydrogenated 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

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		are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
bis-[4-(2,3-epoxipropoxi)phenyl]propane reaction product: bisphenol-A-epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) triethylenetetramine	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 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

NOVA TITAN STICK

No data available

National legislation The Netherlands NOVA TITAN STICK

Waterbezwaarlijkheid Z (1); Algemene Beoordelingsmethodiek (ABM)

National legislation France NOVA TITAN STICK

No data available

National legislation Germany NOVA TITAN STICK

<u>INOVICE THINGS THERE</u>	NOW THAT STICK			
WGK	3; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017			
Talc (Mg3H2(SiO3)4)				
TA-Luft	5.2.1			
bis-[4-(2,3-epoxipropox	bis-[4-{2,3-epoxipropoxi)phenyl]propane			
TA-Luft	5.2.5			
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)				
TA-Luft	5.2.5/1			
fatty acids, C18-unsaturated, dimers, reaction products with polyethylenepolyamines				
TA-Luft	5.2.5/I			
zinc sulphide				
TA-Luft	5.2.1			
formaldehyde/aniline, polymer, hydrogenated				
TA-Luft	5.2.5/I			
triethylenetetramine				
TA-Luft	5.2.5/I			

Nova TITAN STICK

No data available

National legislation United Kingdom NOVA TITAN STICK

No data available

Other relevant data NOVA TITAN STICK

No data available

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Talc (Mg3H2(SiO3)4)

IARC - classification	3; Talc	
TLV - Carcinogen	Talc: Containing no asbestos fibers; A4	
	Talc: Containing asbestos fibers; A1	
sis-[4-(2,3-epoxipropoxi)phenyl]propane		

IARC - classification 3; Bisphenol a diglycidyl ether

15.2. Chemical safety assessment

No chemical safety assessment is required for a mixture.

SECTION 16: Other information

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

H301 Toxic if swallowed.

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.

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

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

(*) INTERNAL CLASSIFICATION BY BIG

ADI Acceptable daily intake

AOFI Acceptable operator exposure level

ATE **Acute Toxicity Estimate BCF Bioconcentration Factor** BEI **Biological Exposure Indices**

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

DMEL Derived Minimal Effect Level Derived No Effect Level DNEL EC10 Effect Concentration 10 % EC50 Effect Concentration 50 %

ErC50 EC50 in terms of reduction of growth rate

GLP **Good Laboratory Practice** LC0 Lethal Concentration 0 % Lethal Concentration 50 % LC50

LD50 Lethal Dose 50 %

LOAEC/LOAEL Lowest Observed Adverse Effect Concentration/Lowest Observed Adverse Effect Level NOAFC/NOAFI No Observed Adverse Effect Concentration/No Observed Adverse Effect Level

NOEC/NOEL No Observed Effect Concentration/No Observed Effect Level OECD Organisation for Economic Co-operation and Development

PBT Persistent, Bioaccumulative & Toxic **PNEC** Predicted No Effect Concentration STP Sludge Treatment Process

very Persistent & very Bioaccumulative vPvB

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.

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