

# SAFETY DATA SHEET

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



## FCP-111

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

#### 1.1. Product identifier

Product name : FCP-111  
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

Sealant  
Adhesive

##### 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  
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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

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

#### 2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

##### Supplemental information

EUH208 Contains: N-(3-(trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.  
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.  
EUH210 Safety data sheet available on request.

#### 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
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878-16239-028-en

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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≥1%	Carc. 2; H351	(1)(2)	Constituent	
N-(3-(trimethoxysilyl)propyl) ethylenediamine 01-2119970215-39	1760-24-3 217-164-6	0.3%≤C<1%	Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Eye Dam. 1; H318	(1)(10)	Constituent	

- (1) For H- and EUH-statements in full: see section 16  
(2) Substance with a Community workplace exposure limit  
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General:

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 (lukewarm) 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:

No effects known.

##### After eye contact:

No effects known.

##### 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

Upon combustion: formation of CO, CO2 and small quantities of nitrous vapours.

### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

No specific fire-fighting instructions required.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). 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

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Gloves (EN 374). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

## 6.2. Environmental precautions

Contain released product.

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

Solid spill: cover with absorbent material. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. 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 strict hygiene. Keep container tightly closed.

### 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.

#### 7.2.2 Keep away from:

Heat sources, water/moisture.

#### 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.

#### Belgium

Titane (dioxyde de)	Time-weighted average exposure limit 8 h	10 mg/m <sup>3</sup>
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#### France

Titane (dioxyde de), en Ti	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m <sup>3</sup>
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#### Austria

Titandioxid (Alveolarstaub)	Tagesmittelwert (MAK)	5 mg/m <sup>3</sup>
	Kurzzeitwert 60(Miw) 2x (MAK)	10 mg/m <sup>3</sup>

#### UK

Titanium dioxide respirable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m <sup>3</sup>
Titanium dioxide total inhalable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m <sup>3</sup>

#### USA (TLV-ACGIH)

Titanium dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	10 mg/m <sup>3</sup>
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##### 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
TiO <sub>2</sub>	NIOSH	7302
TiO <sub>2</sub>	NIOSH	7304

#### 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

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## N-(3-(trimethoxysilyl)propyl)ethylenediamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.6 mg/m <sup>3</sup>	
	Acute local effects inhalation	5.36 mg/m <sup>3</sup>	

### DNEL/DMEL - General population

## N-(3-(trimethoxysilyl)propyl)ethylenediamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.1 mg/m <sup>3</sup>	
	Acute local effects inhalation	4 mg/m <sup>3</sup>	

### PNEC

## N-(3-(trimethoxysilyl)propyl)ethylenediamine

Compartments	Value	Remark
Fresh water	0.062 mg/l	
Marine water	0.006 mg/l	
Fresh water (intermittent releases)	0.62 mg/l	
STP	25 mg/l	
Fresh water sediment	0.22 mg/kg sediment dw	
Marine water sediment	0.022 mg/kg sediment dw	
Soil	0.009 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. 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 strict hygiene. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Respiratory protection not required in normal conditions. Mist formation: aerosol mask with filter type P3.

#### b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Measured breakthrough time	Thickness	Protection index	Remark
natural rubber		≥ 0.4 mm		
nitrile rubber		≥ 0.4 mm		
PVA		≥ 0.4 mm		

#### 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
Odour	Characteristic odour
Odour threshold	No data available in the literature
Colour	Variable in colour, depending on the composition
Particle size	Not applicable (liquid)
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	No data available in the literature
Relative vapour density	No data available in the literature
Vapour pressure	No data available in the literature
Solubility	Water ; insoluble
Relative density	1.3 ; 20 °C
Absolute density	1300 kg/m <sup>3</sup> ; 20 °C
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	No data available in the literature
pH	Not applicable (non-soluble in water)

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## 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

Water/moisture.

### 10.6. Hazardous decomposition products

Upon combustion: formation of CO, CO<sub>2</sub> and small quantities of nitrous vapours.

## 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

##### FCP-111

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	

##### N-(3-(trimethoxysilyl)propyl)ethylenediamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	EPA OPPTS 870.1100	2295 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	EPA OPPTS 870.7600	> 2000 mg/kg bw	24 h	Rabbit (male / female)	Experimental value	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	1.49 mg/l - 2.44 mg/l	4 h	Rat (male / female)	Experimental value	

#### Conclusion

Not classified for acute toxicity

#### Corrosion/irritation

##### FCP-111

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	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	

##### N-(3-(trimethoxysilyl)propyl)ethylenediamine

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment without rinsing
Skin	Slightly irritating	EPA OPPTS 870.2500	4 h	24; 48; 72 hours	Rabbit	Experimental value	

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## Conclusion

Not classified as irritating to the skin  
 Not classified as irritating to the eyes  
 Not classified as irritating to the respiratory system

## Respiratory or skin sensitisation

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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  $\leq 10 \mu\text{m}$ ]

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	

N-(3-(trimethoxysilyl)propyl)ethylenediamine

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

## Conclusion

Not classified as sensitizing for skin  
 Not classified as sensitizing for inhalation

## Specific target organ toxicity

### FCP-111

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  $\leq 10 \mu\text{m}$ ]

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 422	$\geq 500 \text{ mg/kg bw}$		No effect	28 day(s) - 29 day(s)	Rat (male / female)	Experimental value
Dermal	NOAEL	Subacute toxicity test	$\geq 1545 \text{ mg/kg bw/day}$		No adverse systemic effects	11 day(s)	Rat (male / female)	Experimental value
Inhalation (aerosol)	NOAEC	OECD 413	15 mg/m <sup>3</sup> air	Respiratory tract	No adverse systemic effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (aerosol)	LOAEL	OECD 413	45 mg/m <sup>3</sup> air	Respiratory tract	Impairment/deneration	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

## Conclusion

Not classified for subchronic toxicity

## Mutagenicity (in vitro)

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

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	

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## N-(3-(trimethoxysilyl)propyl)ethylenediamine

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Chinese hamster ovary (CHO)		Experimental value	

### Mutagenicity (in vivo)

#### FCP-111

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

## N-(3-(trimethoxysilyl)propyl)ethylenediamine

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Intraperitoneal)	Equivalent to OECD 474	30 h - 72 h	Mouse (male / female)		Experimental value

#### Conclusion

Not classified for mutagenic or genotoxic toxicity

### Carcinogenicity

#### FCP-111

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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/m <sup>3</sup> 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

#### Conclusion

Not classified for carcinogenicity

### Reproductive toxicity

#### FCP-111

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

## N-(3-(trimethoxysilyl)propyl)ethylenediamine

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	750 mg/kg bw/day	14 days (gestation, daily)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	750 mg/kg bw/day	14 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	Equivalent to OECD 422	≥ 500 mg/kg bw/day		Rat (male / female)	Degeneration of heart tissue		Experimental value

#### Conclusion

Not classified for reprotoxic or developmental toxicity

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## 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

#### FCP-111

No (test) data on the mixture available

Judgement of the mixture is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

	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	$\geq 100$ mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate

#### N-(3-(trimethoxysilyl)propyl)ethylenediamine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EU Method C.1	597 mg/l	96 h	Danio rerio	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	EU Method C.2	81 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	OECD 201	8.8 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
	NOEC	OECD 201	3.1 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC		$\geq 1$ ppm	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50	DIN 38412-8	67 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Experimental value; Nominal concentration

### Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

### 12.2. Persistence and degradability

#### N-(3-(trimethoxysilyl)propyl)ethylenediamine

##### Biodegradation water

Method	Value	Duration	Value determination
EU Method C.4	39 %; GLP	28 day(s)	Experimental value

##### Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	1.059 h	$1.5\text{E}6 \text{ /cm}^3$	Calculated value

##### Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111	0.025 h; pH = 7	Primary degradation	Experimental value

### Conclusion

#### Water

Contains non readily biodegradable component(s)

### 12.3. Bioaccumulative potential

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Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

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			

N-(3-(trimethoxysilyl)propyl)ethylenediamine

## Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		-0.3	20 °C	QSAR

## Conclusion

Does not contain bioaccumulative component(s)

## 12.4. Mobility in soil

N-(3-(trimethoxysilyl)propyl)ethylenediamine

### (log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	3.477	Calculated value

### Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Fugacity Model Level III	8.1E-5 %		1.5 %	82.7 %	15.8 %	Calculated value

## Conclusion

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

## 12.5. Results of PBT and vPvB assessment

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

## 12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

## 12.7. Other adverse effects

### FCP-111

#### 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

N-(3-(trimethoxysilyl)propyl)ethylenediamine

#### Water ecotoxicity pH

pH shift

## 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

Can be considered as non 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 10 (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants other than those mentioned in 08 04 09). 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. Dispose of the small quantities as household waste. 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 01 (paper and cardboard packaging).

15 01 02 (plastic packaging).

15 01 04 (metallic packaging).

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## 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
0.00 %	

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
N-(3-(trimethoxysilyl)propyl) ethylenediamine	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.

#### National legislation Belgium

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No data available

#### National legislation The Netherlands

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Waterbezwaarlijkheid	B (4); Algemene Beoordelingsmethodiek (ABM)
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#### National legislation France

FCP-111

No data available

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

Catégorie cancérogène	Titane (dioxyde de), en Ti; C2
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## National legislation Germany

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WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ]	
TA-Luft	5.2.1
N-(3-(trimethoxysilyl)propyl)ethylenediamine	
TA-Luft	5.2.5/I

## National legislation Austria

### FCP-111

No data available

## National legislation United Kingdom

### FCP-111

No data available

## Other relevant data

### FCP-111

No data available

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

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

- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H351 Suspected of causing cancer if inhaled.
- H373 May cause damage to organs (respiratory tract) through prolonged or repeated exposure if inhaled.
- EUH210 Safety data sheet available on request.
- EUH208 Contains a sensitising substance. May produce an allergic reaction.
- 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.

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