

SAFETY DATA SHEET

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

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier:

Product Name : Flexyfix
 Registration Number REACH: Not applicable (mixture)
 Product type REACH: Mixture (Organic)

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

1.2.1 Relevant identified uses

Sealing compound, Adhesive

1.2.2 Uses advised against

No uses advised against

1.3 Details of the supplier of the safety data sheet:

Supplier of safety data sheet

Rewmar Limited
 51 Somers Road
 Rugby
 CV22 7DG
 Tel.: +44 333 800 1966
 Fax: +44 333 800 1967

1.4 Emergency telephone number

01926 633823 (office hours only 9.00 – 17.00 hrs)

Section 2. Hazards Identification

2.1 Classification of 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

2.3 Other hazards:

No other hazards are 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
3-(trimethoxysilyl)propylamine 01-2119510159-45	13822-56-5 237-511-5	1%<C<3%	Skin Irrit. 2; H315 Eye Dam. 1; H318	(1)(10)	Constituent
trimethoxyvinylsilane 01-2119513215-52	2768-02-7 220-449-8	1%<C<3%	Flam. Liq. 3; H226 Acute Tox. 4; H332	(1)(10)	Constituent
hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics 01-2119552497-29		1%<C<10%	Asp. Tox. 1; H304	(1)(10)	UVCB

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

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

Reason for revision: CLP

Revision number: 0303

Publication date: 2011-05-16
 Date of revision: 2018-02-23

Section 4. First aid measures

4.1 Description of first aid measures:

General:

If you feel unwell, seek medical advice.

After inhalation:

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

After skin contact:

Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

No effects known.

After skin contact:

No effects known.

After eye contact:

Slight irritation.

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. Fire-fighting measures

5.1 Suitable extinguishing media:

Adapt extinguishing media to the environment

5.2 Unsuitable extinguishing media

None

5.3 Special exposure hazards

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

5.4 Instructions:

No specific fire fighting instructions required

5.5 Special protective equipment for firefighters:

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

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2 Environmental precautions:

Contain leaking substance. Use appropriate containment to avoid environmental contamination..

6.3 Methods and material for containment and cleaning up:

Cover spill with inert material, e.g.: sand, earth, vermiculite. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water.

6.4 Reference to other sections:

See heading 13.

Section 7. Handling and storage

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

7.1 Precautions for safe handling:

Observe normal hygiene standards

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Safe storage requirements:

Store in a dry area. Store at room temperature. Meet the legal requirements. Max. storage time: 2 year(s).

7.2.2 Keep away from:

No data available.

7.2.3 Suitable packaging material:

Synthetic material, polyethylene

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.

b) National biological limit values

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

8.1.2 Sampling methods

If applicable and available it will be listed below

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

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

8.1.4 DNEL/PNEC values

DNEL/DMEL – Workers

trimethoxyvinylsilane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	4.9 mg/m ³	
	Long-term systemic effects dermal	0.69 mg/kg bw/day	

3-(trimethoxysilyl)propylamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	58 mg/m ³	
	Long-term systemic effects dermal	8.3 mg/kg bw/day	

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Effect level (DNEL/DMEL)	Type	Value	Remark
		No data available	

DNEL - General population

trimethoxyvinylsilane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1.04 mg/m ³	
	Acute systemic effects inhalation	93.4 mg/m ³ day	
	Acute systemic effects dermal	0.3 mg/kg bw/day	
	Acute systemic effects dermal	26.9 mg/kg bw/day	
	Acute systemic effects dermal	0.3 mg/kg bw/day	

3-(trimethoxysilyl)propylamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	17 mg/m ³	

	Long-term systemic effects dermal	5 mg/kg bw/day	
	Long-term systemic effects oral	5 mg/kg bw/day	

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Effect level (DNEL/DMEL)	Type	Value	Remark
		No data available	

PNEC

trimethoxyvinylsilane

Compartments	Value	Remark
Fresh water	0.34 mg/l	
Marine water	0.034 mg/l	
Aqua (intermittent releases)	3.4 mg/l	
STP	110 mg/l	
Fresh water sediment	1.24 mg/kg sediment dw	
Marine water sediment	0.12 mg/kg sediment dw	
Soil	0.052 mg/kg soil dw	

3-(trimethoxysilyl)propylamine

Compartments	Value	Remark
Fresh water	0.33 mg/l	
Marine water	0.033 mg/l	
Aqua (intermittent releases)	3.3 mg/l	
STP	13 mg/l	
Fresh water sediment	1.2 mg/kg sediment dw	
Marine water sediment	0.12 mg/kg sediment dw	
Soil	0.045 mg/kg soil dw	
Oral	44.4 mg/kg food	

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Compartments	Type	Value	Remark
		No data available	

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

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions.

b) Hand protection:

Gloves.

c) Eye protection:

Eye protection not required in normal conditions.

d) Skin protection:

Protective clothing

8.2.3 Environmental exposure controls

See headings 6.2, 6.3 and 13

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical form	Paste
Odour	Barely perceptible
Odour threshold	No data available
Colour	White
Particle size	No data available
Explosion limits	Not applicable

Flammability	Non combustible
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	Not applicable
Evaporation rate	No data available
Relative vapour density	Not applicable
Vapour pressure	No data available
Solubility	No data available
Relative density	1.50 @ 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	Not applicable
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with explosive properties
pH	No data available

9.2 Other Information

Absolute density 150 kg/m³ @ 20 °C

Section 10. Stability and reactivity

10.1 Reactivity:

No data available

10.2 Chemical stability:

Stable under normal conditions.

10.3 Possibility of hazardous reactions:

No data available.

10.4 Conditions to avoid:

No data available

10.5 Incompatible materials:

No data available

10.6 Hazardous decomposition products:

Upon combustion: CO and CO₂ are formed and small quantities of nitrous vapours, hydrogen chloride and formation of metallic fumes.

Section 11. Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:

Flexyfix

No (test) data on the mixture available

trimethoxyvinylsilane

Route of exposure	Parameter	Method	Value	Exposure Time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	7120 mg/kg		Rat (male)	Experimental value	
Oral	LD50	Equivalent to OECD 401	7236 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	3.36 ml/kg bw	24h	Rabbit (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	4 mg/kg bw	24 weeks	Rat (male/female)	QSAR	
Inhalation (vapours)	LD50	Equivalent to OECD 403	16.8 mg/l	4h	Rat (male/female)	Experimental value	

3-(trimethoxysilyl)propylamine

Route of exposure	Parameter	Method	Value	Exposure Time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	2.970 ml/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	11.3 ml/kg bw	24h	Rabbit (male)	Experimental value	

Dermal	LD50	Equivalent to OECD 402	3.36 ml/kg bw	24h	Rabbit (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	4 mg/kg bw	24 weeks	Rat (male/female)	QSAR	
Inhalation (vapours)	LD50	Equivalent to OECD 403	16.8 mg/l	4h	Rat (male/female)	Experimental value	

Route of exposure	Parameter	Method	Value	Exposure Time	Species	Value determination	Remark
Inhalation (vapours)	LC50	OECD 403	> 5 ppm	6h	Rat (male)	Read-across	
Inhalation (vapours)	LC50	OECD 403	> 16 ppm	6h	Rat(female)	Read-across	

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Route of exposure	Parameter	Method	Value	Exposure Time	Species	Value determination	Remark
Inhalation (vapours)	LD50	OECD 401	> 5000 mg/kg bw		Rat (male/female)	Experimental value	
Inhalation (vapours)	LD50	OECD 402	> 3160 mg/kg bw	24h	Rabbit(male/female)	Experimental value	
Inhalation (aerosol)	LC50	OECD 403	> 5266 mg/m ³ air	4h	Rat (male/female)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation:

Flexyfix

No (test)data on the mixture available

trimethoxyvinylsilane

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

3-(trimethoxysilyl)propylamine

Route of exposure	Result	Method	Exposure Time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	Equivalent to OECD 405	24h	24; 48; 72 hours	Rabbit	Read-across	
Skin	Irritating	OECD 404	3 minutes – 240 minutes	1; 24; 48; 72 hours	Rat	Calculated value	

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

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

In the light of practical experience, the classification for this mixture is less stringent than the one based on the calculation set out

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:

Flexyfix

No (test)data on the mixture available

trimethoxyvinylsilane

Route of exposure	Result	Method	Exposure Time	Time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406		24; 48hours	Guinea pig (male/female)	Experimental value	

3-(trimethoxysilyl)propylamine

Route of exposure	Result	Method	Exposure Time	Time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406	72h	24; 48hours	Guinea pig (male/female)	Experimental value	

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Route of exposure	Result	Method	Exposure Time	Time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406	24h	24; 48 hours	Guinea pig (female)	Read-across	
Skin	Not sensitizing	Other	216h	24; 48 hours	Human (male/female)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

Specific target organ toxicity

Flexyfix

No (test)data on the mixture available

trimethoxyvinylsilane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure Time	Species	Value determination
Oral (stomach tube)	LOAEL	OECD 422	62.5 mg/kg bw/day	Thymus	Weight reduction	6 - 8 weeks (daily)	Rat (female)	Experimental value
Inhalation (vapours)	LOAEC	Subchronic toxicity test	100 ppm		Change in urine composition	14 weeks (6h/day, 5 days/week)	Rat (male)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	10 ppm		No effect	14 weeks (6h/day, 5 days/week)	Rat (male/(female))	Experimental value

3-(trimethoxysilyl)propylamine

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure Time	Species	Value determination
Oral (stomach tube)	LOAEL	OECD 408	600 mg/kg bw/day	Liver	Clinical signs; mortality; body weight; food consumption	92 days	Rat (male/(female))	Read-across
Oral (stomach tube)	NOAEL	OECD 408	600 mg/kg bw/day	Liver	No effect	92 days	Rat (male/(female))	Read-across
Inhalation (aerosol)	IRT (inhalation risk test)	Equivalent to OECD 412	147 mg/m ³ air	Lungs	Lesions in larynx, trachea and lung	4 weeks (6h/day, 5 days/week)	Rat (male/(female))	Read-across

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure Time	Species	Value determination
Oral	NOAEL	Equivalent to OECD 408	≥ 5000 kg/kg bw/day		No effect	13 weeks (daily)	Rat (male/(female))	Read-across
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	> 10400 mg/m ³ air		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/(female))	Read-across

Judgement is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

Flexyfix

No (test)data on the mixture available

trimethoxyvinylsilane

Result	Method	Test Substrate	Effect	Value determination
Positive with metabolic activation, positive without metabolic activation	OECD 473	CHL/IU cells	Chromosome aberrations	Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

3-(trimethoxysilyl)propylamine

Result	Method	Test Substrate	Effect	Value determination
Positive with metabolic activation, positive without metabolic activation	OECD 473	CHL/IU cells	Chromosome aberrations	Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 471	Escherichia coli	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Result	Method	Test Substrate	Effect	Value determination
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value

Mutagenicity (in vivo)

Flexyfix

No (test)data on the mixture available

trimethoxyvinylsilane

Result	Method	Exposure Time	Test Substrate	Organ	Value determination
Negative	EPA 560/6-83-001		Mouse (male/female)	Blood	Experimental value

3-(trimethoxysilyl)propylamine

Result	Method	Exposure Time	Test Substrate	Organ	Value determination
Negative	Equivalent to OECD 474	8 weeks (6h/day, 5 days/week)	Mouse (male)	Bone marrow	Read-across

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Result	Method	Exposure Time	Test Substrate	Organ	Value determination
Negative	Equivalent to OECD 483	8 weeks (6h/day, 5 days/week)	Mouse (male)		Read-across
Negative	Equivalent to OECD 475		Rat (male/female)		Read-across
Negative	Equivalent to OECD 474		Mouse (male/female)		Read-across

Carcinogenicity

Flexyfix

No (test) data on the mixture available

3-(trimethoxysilyl)propylamine

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure Time	Species	Value determination
Dermal	NOAEL	Carcinogenic toxicity study	43.8 mg/week	Skin	No carcinogenic effect	104 weeks (3 times/week)	mouse (male)/(female)	Inconclusive, insufficient data

Reproductive toxicity

Flexyfix

No (test) data on the mixture available

trimethoxyvinylsilane

	Parameter	Method	Value	Exposure Time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	EPA OTS 798.4350	100 ppm	10 days (6h/day)	Rat (female)	No Effect		Experimental value
Maternal toxicity	NOAEL	EPA OTS 798.4350	25 ppm	10 days (6h/day)	Rat (female)	No Effect		Experimental value
	NOAEL (P)	OECD 422	1000 mg/kg bw/day	8 week(s)	Rat (male)	No Effect		Experimental value
	NOAEL (P)	OECD 422	250 ppm	6 week(s)	Rat (female)	No Effect		Experimental value

3-(trimethoxysilyl)propylamine

	Parameter	Method	Value	Exposure Time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	EPA OTS 798.4900	100 mg/kg bw/day	14 days (gestation, daily)	Rat	No Effect		Read-across
	LOAEL	EPA OTS 798.4900	600 mg/kg bw/day	14 days (gestation, daily)	Rat	Minor skeletal variations	Skeleton	Read-across
Effects on fertility	NOAEL	OECD 408	600 mg/kg bw/day	92 days	Rat (male/female)	No Effect		Read-across
Maternal toxicity	NOAEL	Other	100 mg/kg bw/day	14 day(s)	Rat	No Effect		Read-across
	LOAEL	Other	600 mg/kg bw/day	14 day(s)	Rat	Clinical signs; mortality; body weight; food consumption	General	Read-across

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

	Parameter	Method	Value	Exposure Time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	>1000 mg/kg bw/day	10 days	Rat	No Effect		Experimental value
Effects on fertility	NOAEC	Equivalent to OECD 416	≥1500 ppm	13 weeks (6h/day, 5 days/week)	Rat (male/female)	No Effect		Experimental value
	NOAEC	Equivalent to OECD 421	≥300 ppm	8 weeks (6h/day, 5 days/week)	Rat (male/female)	No Effect		Experimental value
	NOAEL	Equivalent to OECD 422	>1000 mg/kg bw/day	6 weeks (daily)	Rat (male/female)	No Effect		Experimental value

Judgement is based on the relevant ingredients

Conclusion CMR

Not classified for reprotoxic or developmental toxicity

Not classified for mutagenic or genotoxic toxicity

Not classified for carcinogenicity

Toxicity other effects

Flexyfix

No (test) data on the mixture available

Chronic effects from short and long-term exposure

Flexyfix

No (test) data on the mixture available

Section 12. Ecological information

12.1 Toxicity:

Flexyfix

No (test) data on the mixture available

trimethoxyvinylsilane

	Parameter	Method	Value	Duration	Species	Test Design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		191 mg/l	96 h	Oncorhynchus mykiss		Fresh water	Experimental value; Nominal concentration
Acute toxicity invertebrates	EC50	EU Method C.2	168.7 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	EPA 67014-73-0	210 mg/l	7 day(s)	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Nominal concentration

3-(trimethoxysilyl)propylamine

	Parameter	Method	Value	Duration	Species	Test Design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	>934 mg/l	96 h	Danio rerio	Semi-static system	Fresh water	Read-across; GLP
Acute toxicity invertebrates	EC50	OECD 202	331 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across; GLP
Toxicity algae and other aquatic plants	EC50	EU Method C.3	> 1000 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Read-across; GLP
Toxicity aquatic microorganisms	EC50	Other	43 mg/l	5.75 h	Pseudomonas putida	Static system	Fresh water	Read-across; GLP

Hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

	Parameter	Method	Value	Duration	Species	Test Design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 1028 mg/l	96 h	Scophthalmus maximus			Experimental value
Acute toxicity invertebrates	LC50	Other	> 3193 mg/l	48 h	Acartia tonsa			Experimental value
Toxicity algae and other aquatic plants	ErC50	ISO 10253	> 10000 mg/l	72 h	Skeletonema costatum			Experimental value
Long-term toxicity fish	NOEL		> 1000 mg/l	28 day(s)	Oncorhynchus mykiss			QSAR
Long-term toxicity aquatic invertebrates	NOEL		> 1000 mg/l	21 day(s)	Daphnia magna			QSAR
Toxicity aquatic microorganisms	EC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

Judgement of the mixture is based on the relevant ingredients

Conclusion

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

12.2 Persistence and degradability:

trimethoxyvinylsilane

Biodegradation water

Method	Value	Duration	Value Determination
OECD 301F: Manometric Respirometry Test	51 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value Determination
	0.56 day(s)	500000 /cm ³	Calculated value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value Determination
OECD 111: Hydrolysis as a function of pH	< 2.4 h; pH = 7	Primary degradation	Weight of evidence

3-(trimethoxysilyl)propylamine

Biodegradation water

Method	Value	Duration	Value Determination
EU Method C.4	67 %; GLP	28 day(s)	Experimental value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value Determination
	4 h; pH = 7	Primary degradation	QSAR

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Biodegradation water

Method	Value	Duration	Value Determination
OECD 306: Biodegradability in Seawater	74 %	28 day(s)	Experimental value

Phototransformation water (DT50 water)

Method	Value	Conc. OH-radicals	Value Determination
	No effect		

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value Determination
	No effect		

Conclusion

Contains non readily biodegradable component(s)

12.3 Bioaccumulative potential:

Flexyfix

No (test)data on the mixture available

Trimethoxyvinylsilane

BCF other aquatic organisms

Parameter	Method	Remark	Value	Temperature	Value Determination
					Data waiving

Log Kow

Method	Remark	Value	Temperature	Value Determination
KOWWIN	Calculated	-2	20 °C	QSAR

3-(trimethoxysilyl)propylamine

Log Kow

Method	Remark	Value	Temperature	Value Determination
		0.2	20 °C	QSAR

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Log Kow

Method	Remark	Value	Temperature	Value Determination
	No data available			

Conclusion

Contains bioaccumulative component(s)

12.4 Mobility in soil:

Trimethoxyvinylsilane

(Log) Koc

Parameter	Method	Value	Value Determination
	No data available		

Volatility (Henry's Law constant H)

Method	Method	Temperature	Value Determination
8.72E-5 atm m ³ /mol		25 °C	Estimated value

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	8.3%		83.2%	7.4%	1%	Calculated value

Conclusion

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

12.5 Results of PBT and vPvB assessment:

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

12.6 Other adverse effects:

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

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)

3-(trimethoxysilyl)propylamine

Ground water

Ground water pollutant

Section 13. Disposal considerations

13.1 Waste treatment methods:

13.1.1 Provisions relating to waste

Can be considered as non-hazardous waste according to Regulation (EU) No 1357/2014.

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

Recycle/reuse. Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment..

13.1.3 Packaging/Container

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

15 01 02 (plastic packaging).

Section 14. Transport information

Road (ADR)

14.1 UN number:

Transport	Not subject
UN number	

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Hazard identification number	
Class	
Classification code	

14.4 Packing group:

Packaging	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	
Limited quantities	

Rail (RID)

14.1 UN number:

Transport	Not subject
UN number	

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Hazard identification number	
Class	
Classification code	

14.4 Packing group:

Packaging	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	
Limited quantities	

Inland waterways (ADN)

14.1 UN number:

Transport	Not subject
UN number	

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Hazard identification number	
Class	
Classification code	

14.4 Packing group:

Packaging	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	
Limited quantities	

Sea (IMDG)

14.1 UN number:

Transport	Not subject
UN number	

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Hazard identification number	
Class	
Classification code	

14.4 Packing group:

Packaging	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	
Limited quantities	

Air (ICAO-TI/IATA-DGR)

14.1 UN number:

Transport	Not subject
UN number	

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Hazard identification number	
------------------------------	--

Class	
Classification code	
14.4 Packing group:	
Packaging	
Labels	
14.5 Environmental hazards:	
Environmentally hazardous substance mark	no
14.6 Special precautions for user:	
Special provisions	
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

Section 15. Regulatory information

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

European legislation:

Volatile organic compounds (VOC) <5.343% (<80.35g/Ltr)

15.2 Chemical safety assessment:

No chemical safety assessment has been conducted.

Section 16. Other information

Full text of any H-statements referred to under headings 2 and 3:

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

PBT-substances = persistent, bioaccumulative and toxic substances

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

The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances.