

SAFETY DATA SHEET

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

847781

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

1.1. Product identifier

Product name : 847781
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

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Rubix Engineering
31, Rue de la Baume
75008 PARIS, France

Tel : +33 (0)1.44.86.08.10
E-mail : info-rubix-engineering@rubix.com

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

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
trimethoxyvinylsilane 01-2119513215-52	2768-02-7 220-449-8	1%<C<5%	Flam. Liq. 3; H226 Acute Tox. 4; H332	(1)(10)	Constituent
bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate 01-2119978231-37	63843-89-0 264-513-3	0.1%<C<1%	STOT RE 1; H372 Acute Tox. 4; H302 Aquatic Chronic 1; H410	(1)(9)	Constituent

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Reason for revision: 2;3
Revision number: 0600

Publication date: 2010-09-06
Date of revision: 2018-04-10

Product number: 51088

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134-15960-608-en

hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics 01-2119552497-29		1%<C<10%	Asp. Tox. 1; H304	(1)(10)	Constituent
reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide) 01-0000017860-69	432-430-3	1%<C<10%	Aquatic Chronic 4; H413	(1)	Constituent

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

(9) M-factor, see heading 16

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

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

After skin contact:

Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

After eye contact:

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

After ingestion:

Rinse mouth with water. 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: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Class A foam extinguisher, Water (quick-acting extinguisher, reel).

Major fire: Water, Class A foam.

5.1.2 Unsuitable extinguishing media:

Small fire: Quick-acting BC powder extinguisher, Quick-acting CO2 extinguisher.

5.2. Special hazards arising from the substance or mixture

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

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Scoop solid spill into closing containers. Clean contaminated surfaces with a soap solution. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

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

7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities**7.2.1 Safe storage requirements:**

Storage temperature: 20 °C. Store in a dry area. Keep container in a well-ventilated place. Store at room temperature. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, water/moisture.

7.2.3 Suitable packaging material:

Synthetic material.

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	27.6 mg/m ³	
	Long-term systemic effects dermal	3.9 mg/kg bw/day	

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.05 mg/m ³	
	Long-term systemic effects dermal	0.07 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/DMEL - General population**trimethoxyvinylsilane**

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	18.9 mg/m ³	
	Long-term systemic effects dermal	7.8 mg/kg bw/day	
	Long-term systemic effects oral	0.3 mg/kg bw/day	

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.01 mg/m ³	
	Long-term systemic effects dermal	33 µg/kg bw/day	
	Long-term systemic effects oral	3 µg/kg bw/day	

Reason for revision: 2;3

Publication date: 2010-09-06

Date of revision: 2018-04-10

Revision number: 0600

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

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

PNEC

trimethoxyvinylsilane

Compartment	Value	Remark
Fresh water	0.36 mg/l	
Aqua (intermittent releases)	2.4 mg/l	
Marine water	0.036 mg/l	
STP	6.6 mg/l	
Fresh water sediment	1.3 mg/kg sediment dw	
Marine water sediment	0.13 mg/kg sediment dw	
Soil	0.055 mg/kg soil dw	

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Compartment	Value	Remark
Fresh water	0 mg/l	
Marine water	0 mg/l	
Aqua (intermittent releases)	0.61 mg/l	
STP	1 mg/l	
Fresh water sediment	504.4 mg/kg sediment dw	
Marine water sediment	50.44 mg/kg sediment dw	
Soil	1 mg/kg soil dw	

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

Compartment	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

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 normal hygiene standards. 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	Characteristic odour
Odour threshold	No data available
Colour	Variable in colour, depending on the composition
Particle size	No data available
Explosion limits	No data available
Flammability	Non-flammable
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
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	Water ; insoluble Organic solvents ; soluble
Relative density	1.4 ; 20 °C
Decomposition temperature	No data available

Reason for revision: 2;3

Publication date: 2010-09-06

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Auto-ignition temperature	No data available
Flash point	> 240 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Surface tension	No data available
Absolute density	1400 kg/m ³ ; 20 °C

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, CO₂ and small quantities of nitrous vapours, hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

GISS MS SEALANT FASTER - 847781

No (test)data on the mixture available

Judgement is based on the relevant ingredients

trimethoxyvinylsilane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	7120 mg/kg bw - 7236 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	3259 mg/kg bw - 3880 mg/kg bw	24 h	Rabbit (female)	Converted value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	16.8 mg/l	4 h	Rat (male/female)	Experimental value	

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	1490 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 3170 mg/kg bw	24 h	Rat (male/female)	Experimental value	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	> 460 mg/m ³ air	4 h	Rat (male/female)	Experimental value	

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

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

Reason for revision: 2;3

Publication date: 2010-09-06

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reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 2000 mg/kg		Rat	Literature study	
Dermal	LD50		> 2000 mg/kg		Rat	Literature study	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

GISS MS SEALANT FASTER - 847781

No (test)data on the mixture available

Judgement is based on the relevant ingredients

trimethoxyvinylsilane

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

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405	30 seconds	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	Equivalent to OECD 404	24 h	24; 72 hours	Rabbit	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
Eye	Not irritating	OECD 405	24 h	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	Other	24 h	24; 48; 72 hours	Human	Experimental value	

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

trimethoxyvinylsilane

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

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

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

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

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

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse	Experimental value	

Conclusion

Reason for revision: 2;3

Publication date: 2010-09-06

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

Specific target organ toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

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	Bladder	Histopathological changes	6 weeks (daily) - 8 weeks (daily)	Rat (male/female)	Experimental value
Oral (stomach tube)	LOAEL	OECD 422	250 mg/kg bw/day	Bladder	Histopathological changes	6 weeks (daily) - 8 weeks (daily)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	100 ppm		No effect	14 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL	OECD 421	10 mg/kg bw/day	Lymph nodes	Enlargement of the lymph glands	28 day(s)	Rat (male/female)	Experimental value
Oral (stomach tube)	LOAEL	OECD 421	10 mg/kg bw/day	Liver	Enlargement/affectation of the liver	28 day(s)	Rat (male/female)	Experimental value
Oral (stomach tube)	LOAEL	OECD 421	10 mg/kg bw/day	Spleen	Spleen enlargement/affectation	28 day(s)	Rat (male/female)	Experimental value

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 mg/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

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL		1000 mg/kg bw/day		No effect	28 day(s)	Rat	Literature study

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

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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)		Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Reason for revision: 2;3

Publication date: 2010-09-06

Date of revision: 2018-04-10

Revision number: 0600

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bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Ames test	Bacteria (S.typhimurium)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value
Positive with metabolic activation, positive without metabolic activation	OECD 473	Chinese hamster ovary (CHO)		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

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Result	Method	Test substrate	Effect	Value determination
Negative	Ames test	Bacteria (S.typhimurium)		Literature study
Negative	Ames test	Escherichia coli		Literature study
Negative	Chromosome aberration assay	Human lymphocytes		Literature study

Mutagenicity (in vivo)

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

trimethoxyvinylsilane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Inhalation (vapours))	OECD 489	3 days (1x/day)	Rat (female)		Experimental value

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

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

GISS MS SEALANT FASTER - 847781

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

GISS MS SEALANT FASTER - 847781

No (test)data on the mixture available

Judgement is based on the relevant ingredients

trimethoxyvinylsilane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	NOAEL	EPA OTS 798.4350	100 ppm	10 days (gestation, 6h/day)	Rat (female)	No effect		Experimental value
Maternal toxicity (Inhalation (vapours))	NOAEL	EPA OTS 798.4350	25 ppm	10 days (gestation, 6h/day)	Rat (female)	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL (P)	OECD 422	1000 mg/kg bw/day	≤ 43 day(s)	Rat (male)	No effect		Experimental value

Reason for revision: 2;3

Publication date: 2010-09-06

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bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity								Data waiving
Maternal toxicity								Data waiving
Effects on fertility	NOAEL	Equivalent to OECD 421	≥ 10 mg/kg bw/day	36 day(s) - 50 day(s)	Rat (male/female)	No effect		Experimental value

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 day(s)	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		Read-across
	NOAEC	Equivalent to OECD 421	≥ 300 ppm	8 weeks (6h/day, 5 days/week)	Rat (male/female)	No effect		Read-across
	NOAEL	Equivalent to OECD 422	> 1000 mg/kg bw/day	6 weeks (daily)	Rat (male/female)	No effect		Read-across

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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No (test)data on the mixture available

Chronic effects from short and long-term exposure

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No effects known.

SECTION 12: Ecological information

12.1. Toxicity

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	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity crustacea	EC50	OECD 202	706 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value of similar product
Toxicity algae and other aquatic plants	EC50	OECD 201	731 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value of similar product
	NOEC	OECD 201	250 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value of similar product

Judgement of the mixture is based on test data on the mixture as a whole

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 crustacea	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
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	OECD 211	28.1 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP

Reason for revision: 2;3

Publication date: 2010-09-06

Date of revision: 2018-04-10

Revision number: 0600

Product number: 51088

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bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 100 mg/l	96 h	Danio rerio	Semi-static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	Other	61 mg/l	72 h	Scenedesmus subspicatus	Static system	Fresh water	Experimental value; Biomass
Long-term toxicity aquatic crustacea	NOEC	OECD 211	2 µg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	IC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

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 crustacea	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 crustacea	NOEL		> 1000 mg/l	21 day(s)	Daphnia magna			QSAR
Toxicity aquatic micro-organisms	EC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		> 1000 mg/l	96 h	Oncorhynchus mykiss			Literature study
Acute toxicity crustacea	EC50		> 1000 mg/l	48 h	Daphnia magna			Literature study
Toxicity algae and other aquatic plants	EC50	EPIWIN 3.10	85 mg/l	96 h	Algae			Calculated value
Long-term toxicity aquatic crustacea	NOEC		0.9 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value

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

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B: CO2 Evolution Test	2 %	28 day(s)	Experimental value

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		

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Biodegradation water

Method	Value	Duration	Value determination
	20 %	28 day(s)	Literature study

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

trimethoxyvinylsilane

Log Kow

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

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	24.3 - 437.1	60 day(s)	Cyprinus carpio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		3.7	23 °C	Experimental value
OECD 117		> 6.5	23 °C	Experimental value
Other		4.2	23 °C	Experimental value

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

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		> 6		Experimental value

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

trimethoxyvinylsilane

(log) Koc

Parameter	Method	Value	Value determination
			Data waiving

Volatility (Henry's Law constant H)

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

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	3.04 - 8.1	Calculated 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

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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)

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

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

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

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

European Union

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

15 01 02 (plastic packaging).

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
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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
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14.6. Special precautions for user

Special provisions	
Limited quantities	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	Not applicable, based on available data
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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
4.57 % - 4.63 %	
63.98 g/l - 64.86 g/l	

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
· trimethoxyvinylsilane · hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, <0.03% aromatics	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (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 R65 or 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 R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public. 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
· trimethoxyvinylsilane	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopie" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: "For professional users only". 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC. 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

National legislation Belgium

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No data available

National legislation The Netherlands

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Reason for revision: 2;3

Publication date: 2010-09-06

Date of revision: 2018-04-10

Revision number: 0600

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Waterbezwaarlijkheid Z (1)

National legislation France

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No data available

National legislation Germany

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WGK	1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4) and Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) of 18 April 2017
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trimethoxyvinylsilane

TA-Luft	5.2.5
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bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate

TA-Luft	5.2.1
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reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

TA-Luft	5.2.5; I
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National legislation United Kingdom

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No data available

Other relevant data

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No data available

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information**Full text of any H-statements referred to under heading 3:**

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H372 Causes damage to organs (liver, lymph nodes, spleen) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

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

M-factor

bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	10	Chronic	ECHA
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Reason for revision: 2;3

Publication date: 2010-09-06

Date of revision: 2018-04-10

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