

## **SAFETY DATA SHEET**

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

## Fix All Crystal Clear

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

1.1. Product identifier

Product name : Fix All Crystal Clear
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

Moisture-repellent compound

#### 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

SOUDAL N.V. Everdongenlaan 18-20 B-2300 Turnhout **2** +32 14 42 42 31 +32 14 42 65 14 msds@soudal.com

#### Manufacturer of the product

SOUDAL N.V. Everdongenlaan 18-20 B-2300 Turnhout **2** +32 14 42 42 31 +32 14 42 65 14 msds@soudal.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

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aquatic Chronic	category 3	H412: Harmful to aquatic life with long lasting effects.

## 2.2. Label elements

Hazard pictograms

No pictogram is used

Signal word No signal word

H-statements

H412 Harmful to aquatic life with long lasting effects.

P-statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.
P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

#### 2.3. Other hazards

No other hazards known

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34-15960-611-6

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## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

		CAS No EC No		Conc. (C)	Classification according to CLP	Note	Remark
trimethoxyvinylsilane 01-2119513215-52		2768-02-7 220-449-8		1% <c<10%< td=""><td>Flam. Liq. 3; H226 Acute Tox. 4; H332</td><td>(1)(10)</td><td>Constituent</td></c<10%<>	Flam. Liq. 3; H226 Acute Tox. 4; H332	(1)(10)	Constituent
3-(trimethoxysilyl)propylamine 01-2119510159-45		13822-56-5 237-511-5		1% <c<3%< td=""><td>Eye Dam. 1; H318 Skin Irrit. 2; H315</td><td>(1)(10)</td><td>Constituent</td></c<3%<>	Eye Dam. 1; H318 Skin Irrit. 2; H315	(1)(10)	Constituent
bis(1,2,2,6,6-pentamethyl-4-pip dimethylethyl)-4-hydroxyphenyl 01-2119978231-37		63843-89-0 264-513-3		%	STOT RE 1; H372 Acute Tox. 4; H302 Aquatic Chronic 1; H410	(1)(9)	Constituent
dioctylbis(pentane-2,4-dionato- 01-0000020199-67		54068-28-9 483-270-6			Skin Sens. 1; H317 STOT SE 2; H371 STOT RE 2; H373	(1)(8)(10)	Constituent
pyrithione zinc 01-2119511196-46		13463-41-7 236-671-3		%	Acute Tox. 3; H301 Acute Tox. 4; H332 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)(9)	Constituent

<sup>(1)</sup> For H-statements in full: see heading 16

## 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. Remove contact lenses, if present and easy to do. Continue rinsing. 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: No effects known.

After ingestion:

Arter 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:

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<sup>(8)</sup> Specific concentration limits, see heading 16

<sup>(9)</sup> M-factor, see heading 16

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

Adapt extinguishing media to the environment for surrounding fires.

## 5.1.2 Unsuitable extinguishing media:

Not applicable.

#### 5.2. Special hazards arising from the substance or mixture

On burning: release of silicon oxides, carbon monoxide - carbon dioxide.

#### 5.3. Advice for firefighters

5.3.1 Instructions:

Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. 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, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Use appropriate containment to avoid environmental contamination. Prevent soil and water pollution. Prevent spreading in sewers.

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

Allow product to solidify and remove it by mechanical means. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

## 6.4. Reference to other sections

See 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. Do not discharge the waste into the drain. Keep container tightly closed.

## 7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store at room temperature. Keep out of direct sunlight. Protect against frost. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, combustible materials.

7.2.3 Suitable packaging material:

Plastics.

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

Etain (composés organiques de) (en Sn)	Time-weighted average exposure limit 8 h	0.1 mg/m³
	Short time value	0.2 mg/m³

## France

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Etain (composés organiques d')	, en Sn	indicative)	ge exposure limit 8 h (VL: Valeur n		
		Short time value (VL: \	/aleur non réglementaire indicativ	ve)	0.2 mg/m <sup>3</sup>
UK					
Tin compounds, organic, except	: Cyhexatin (ISO), (as Sn)	Time-weighted averag (EH40/2005))	0.1 mg/m <sup>3</sup>		
		Short time value (Wor	kplace exposure limit (EH40/2005	5))	0.2 mg/m <sup>3</sup>
USA (TLV-ACGIH)					•
Tin organic compounds, as Sn		Time-weighted average	ge exposure limit 8 h (TLV - Adopte	ed Value)	0.1 mg/m <sup>3</sup>
ini organio compoundo) do on		Short time value (TLV			0.2 mg/m <sup>3</sup>
b) National biological limit valu	29				- 0,
	d available these will be listed be	low.			
1.2 Sampling methods	aranable tirese iiii be iistea be				
If applicable and available it will	be listed below.				
1.3 Applicable limit values when	using the substance or mixture	as intended			
If limit values are applicable and	d available these will be listed be	low.			
1.4 DNEL/PNEC values					
DNEL/DMEL - Workers					
<u>trimethoxyvinylsilane</u>					
Effect level (DNEL/DMEL)	Туре		Value	Remark	
DNEL	Long-term systemic effec	ts inhalation	27.6 mg/m <sup>3</sup>		
	Long-term systemic effec	ts dermal	3.9 mg/kg bw/day		
3-(trimethoxysilyl)propylamine					
Effect level (DNEL/DMEL)	Туре		Value	Remark	
DNEL	Long-term systemic effect		58 mg/m³		
	Long-term systemic effec		8.3 mg/kg bw/day		
bis(1,2,2,6,6-pentamethyl-4-pip	eridyl) [[3,5-bis(1,1-dimethyleth	yl)-4-hydroxyphenyl]m		Damani	
Effect level (DNEL/DMEL)  DNEL	Type	ts inhalation	Value 0.05 mg/m³	Remark	
DINEL	Long-term systemic effections Long-term systemic effections		0.05 mg/kg bw/day		
dia di Hiliata da da 2 4 dia anta		ts definal	0.07 mg/kg bw/uay		
dioctylbis(pentane-2,4-dionato- Effect level (DNEL/DMEL)	Type		Value	Remark	
DNEL DNEL	Long-term systemic effect	ts inhalation	84 mg/m³	Roman	
	Acute systemic effects inl		84 mg/m³		
	Long-term local effects in		0.091 mg/m <sup>3</sup>		
	Acute local effects inhala	tion	0.091 mg/m³		
	Long-term systemic effec	ts dermal	0.07 mg/kg bw/day		
pyrithione zinc					
Effect level (DNEL/DMEL)	Туре		Value	Remark	
DNEL	Long-term systemic effec	ts dermal	0.01 mg/kg bw/day		
DNEL/DMEL - General population	<u>on</u>				
trimethoxyvinylsilane	<u>.</u>			h .	
Effect level (DNEL/DMEL)	Туре	l. C. b. b. C.	Value 13.0 m / s 3	Remark	
	Long-term systemic effec		18.9 mg/m³	Remark	
Effect level (DNEL/DMEL)	Long-term systemic effect Long-term systemic effect	ts dermal	18.9 mg/m³ 7.8 mg/kg bw/day	Remark	
Effect level (DNEL/DMEL) DNEL	Long-term systemic effec	ts dermal	18.9 mg/m³	Remark	
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine	Long-term systemic effectiong-term systemic effectiong-term systemic effectiong-term systemic effectiong	ts dermal	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day		
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine Effect level (DNEL/DMEL)	Long-term systemic effectiong-term systemic effectiong-term systemic effectiong-term systemic effective.  Type	ts dermal ts oral	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value	Remark	
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine	Long-term systemic effect Long-term systemic effect Long-term systemic effect Type Long-term systemic effect Long-term sys	ts dermal ts oral ts inhalation	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³		
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine Effect level (DNEL/DMEL)	Long-term systemic effect Long-term systemic effect Long-term systemic effect  Type Long-term systemic effect Long-term systemic effect Long-term systemic effect	tts dermal tts oral ets inhalation tts dermal	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day		
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine Effect level (DNEL/DMEL)  DNEL	Long-term systemic effect Long-term systemic effect Long-term systemic effect  Type Long-term systemic effect Long-term systemic effect Long-term systemic effect Long-term systemic effect	ets dermal ets oral ets inhalation ets dermal ets oral	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day		
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine Effect level (DNEL/DMEL)  DNEL  bis(1,2,2,6,6-pentamethyl-4-pip	Long-term systemic effect Long-term systemic	ets dermal ets oral ets inhalation ets dermal ets oral	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day		
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine Effect level (DNEL/DMEL)  DNEL	Long-term systemic effect Long-term systemic effect Long-term systemic effect  Type Long-term systemic effect Long-term systemic effect Long-term systemic effect Long-term systemic effect	ts dermal ts oral ts inhalation ts dermal ts oral yl)-4-hydroxyphenyl]m	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day	Remark	
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine  Effect level (DNEL/DMEL)  DNEL  bis(1,2,2,6,6-pentamethyl-4-pig  Effect level (DNEL/DMEL)	Long-term systemic effect Long-term systemic	tts dermal tts oral tts inhalation tts dermal tts oral yl)-4-hydroxyphenyl]m	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day vethyl]butylmalonate Value 0.01 mg/m³	Remark	
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine  Effect level (DNEL/DMEL)  DNEL  bis(1,2,2,6,6-pentamethyl-4-pig  Effect level (DNEL/DMEL)	Long-term systemic effect Long-term systemic	tts dermal  tts oral  tts inhalation  tts dermal  tts oral  yl)-4-hydroxyphenyl]m  tts inhalation  tts dermal	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day value 0.01 mg/m³ 33 µg/kg bw/day	Remark	
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine  Effect level (DNEL/DMEL)  DNEL  bis(1,2,2,6,6-pentamethyl-4-pig  Effect level (DNEL/DMEL)	Long-term systemic effect Long-term systemic effect Long-term systemic effect Type Long-term systemic effect Long-term systemic effect Long-term systemic effect long-term systemic effect eridyl) [[3,5-bis(1,1-dimethyleth)] Type Long-term systemic effect Long-term systemic effect Long-term systemic effect	tts dermal  tts oral  tts inhalation  tts dermal  tts oral  yl)-4-hydroxyphenyl]m  tts inhalation  tts dermal	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day vethyl]butylmalonate Value 0.01 mg/m³	Remark	
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine Effect level (DNEL/DMEL)  DNEL  bis(1,2,2,6,6-pentamethyl-4-pip Effect level (DNEL/DMEL)  DNEL	Long-term systemic effect Long-term systemic effect Long-term systemic effect Type Long-term systemic effect Long-term systemic effect Long-term systemic effect long-term systemic effect eridyl) [[3,5-bis(1,1-dimethyleth)] Type Long-term systemic effect Long-term systemic effect Long-term systemic effect	tts dermal  tts oral  tts inhalation  tts dermal  tts oral  yl)-4-hydroxyphenyl]m  tts inhalation  tts dermal	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day value 0.01 mg/m³ 33 µg/kg bw/day	Remark	
Effect level (DNEL/DMEL)  DNEL  3-(trimethoxysilyl)propylamine Effect level (DNEL/DMEL)  DNEL  bis(1,2,2,6,6-pentamethyl-4-pip Effect level (DNEL/DMEL)  DNEL	Long-term systemic effect Long-term systemic effect Long-term systemic effect Type Long-term systemic effect Long-term systemic effect Long-term systemic effect long-term systemic effect eridyl) [[3,5-bis(1,1-dimethyleth)] Type Long-term systemic effect Long-term systemic effect Long-term systemic effect	tts dermal  tts oral  tts inhalation  tts dermal  tts oral  yl)-4-hydroxyphenyl]m  tts inhalation  tts dermal	18.9 mg/m³ 7.8 mg/kg bw/day 0.3 mg/kg bw/day  Value 17 mg/m³ 5 mg/kg bw/day 5 mg/kg bw/day value 0.01 mg/m³ 33 µg/kg bw/day	Remark	

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methoxyvinylsilane					
Compartments		Value		Remark	
Fresh water		0.36 mg/l			
Aqua (intermittent rele <mark>a</mark> :	ses)	2.4 mg/l			
Marine water		0.036 mg/l			
STP		6.6 mg/l			
Fresh water sediment		1.3 mg/kg sedir			
Marine water sediment		0.13 mg/kg sed			
Soil		<mark>0.055 m</mark> g/kg so	il dw		
(trimethoxysilyl)propyl <mark>ar</mark>	<u>mine</u>				
Compartments		Value		Remark	
Fresh water		0.33 mg/l			
Marine water		<mark>0.033 m</mark> g/l			
Aqua (intermittent relea	ses)	3.3 mg/l			
STP		13 mg/l			
Fresh water sediment		1.2 mg/kg sedir			
Marine water sediment		<mark>0.12 mg</mark> /kg sed			
Soil		<mark>0.045 m</mark> g/kg so	il dw		
Oral		44.4 mg/kg foo	d		
(1,2,2,6,6-pentamethyl-	4-piperidyl) [[3,5-bis(1,1-din	<mark>nethyleth</mark> yl)-4-h	ydroxyphenyl]methyl]butylm	<u>alonate</u>	
Compartments		Value		Remark	
Fresh water		0 mg/l			
Marine water		0 mg/l			
Aqua (intermittent relea:	ses)	0.61 mg/l			
STP		1 mg/l			
Fresh water sediment		<mark>504.4 m</mark> g/kg se	diment dw		
Marine water sediment		<mark>50.44 m</mark> g/kg se	diment dw		
Soil		1 mg/kg soil dw	V		
octylbis(pentane-2,4-dio	nato-O,O')tin				
Compartments		Value		Remark	
Fresh water		0.026 mg/l			
Marine water		0.003 mg/l			
Aqua (intermittent relea:	ses)	0.26 mg/l			
STP		1 mg/l			
Fresh water sediment		0.155 mg/kg se	ediment dw		
Marine water sediment		<mark>0.015 m</mark> g/kg se	ediment dw		
Soil		<mark>0.016 m</mark> g/kg so	il dw		
rithione zinc					
		Value		Remark	
Compartments		90 ng/l			
Compartments Fresh water		JU 118/1			
		90 ng/l			
Fresh water		90 ng/l			
Fresh water Marine water			ediment dw		

## 8.1.5 Control banding

Soil

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.

1.02 mg/kg soil dw

## 8.2.1 Appropriate engineering controls

Keep away from naked flames/heat.

## 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.

- materials (good resistance)

Polyethylene.

c) Eye protection:

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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

	Paste
	Mild odour
	Characteristic odour
	No data available
	Variable in colour, depending on the composition
	No data available
	No data available
	Non-flammable
	Not applicable (mixture)
	No data available
	Water ; insoluble
	Organic solvents ; soluble
	1.053 ; 20 °C
ture	No data available
re	No data available
	No data available
	No chemical group associated with explosive properties
	Not classified Not classified
	No data available

## 9.2. Other information

Absolute density 1053 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

**Precautionary measures** 

Keep away from naked flames/heat.

## 10.5. Incompatible materials

Combustible materials.

## 10.6. Hazardous decomposition products

On burning: release of silicon oxides, carbon monoxide - carbon dioxide.

## SECTION 11: Toxicological information

## 11.1. Information on toxicological effects

11.1.1 Test results

Acute 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	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	Equivalent to OECD	7120 mg/kg bw -		Rat (male/female)	Experimental	
		401	7236 mg/kg bw			value	
Dermal	LD50	Equivalent to OECD	3259 mg/kg bw -	24 h	Rabbit (female)	Converted value	
		402	3880 mg/kg bw				
Inhalation (vapours)	LC50	Equivalent to OECD	16.8 mg/l	4 h	Rat (male/female)	Experimental	
		403				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	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50	OECD 403	> 5 ppm	6 h	Rat (male)	Read-across	
Inhalation (vapours)	LC50	OECD 403	> 16 ppm	6 h	Rat (female)	Read-across	

<u>bis(1,2,2,6,6-pentamethyl-4-piperidyl)</u> [[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/m³ air	4 h	Rat (male/female)	Experimental value	

dioctylbis(pentane-2,4-dionato-0,0')tin

Route of exposure	Parai	meter	Method	Value	Exposure time	- I	Value determination	Remark
Oral	LD50		OECD 423	2500 mg/kg		Rat (female)	Experimental value	
Dermal	LD50		OECD 402	> 2000 mg/g	24 h	Rat (male/female)	Experimental value	
Inhalation (vapours)	LC50		Equivalent to OECD 403	5.1 mg/l air	4 h	Rat (male/female)	Experimental value	

pyrithione zinc

Route of exposure	Param	eter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		OECD 401	269 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50		EPA OPP 81-2	> 2000 mg/kg	24 h	Rat (male/female)	Experimental value	
Inhalation (aerosol)	LC50		OECD 403	1.03 mg/l air	4 h	Rat (male/female)	Experimental value	

## Conclusion

Not classified for acute toxicity

## Corrosion/irritation

#### Fix All Crystal Clear

No (test)data on the mixture available

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

trimethoxyvinylsilane

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

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Skin   Sk	Serious eye damage Irritating hyl-4-piperidyl) [[: Result  Not irritating  Not irritating	Method  Equivalent to OECD 405  OECD 404  3,5-bis(1,1-dimethylet)  Method  Equivalent to OECD 405  Equivalent to OECD 405  Equivalent to OECD 40404	3 minu minute hyl)-4-h Exposi	ydroxyphen ure time	Time point  24; 48; 72 hours  1; 24; 48; 72; 168 hours  yi]methyl]butylmalo  Time point  24; 48; 72 hours	Rabbit Rat  Rat  Species	Value determination  Read-across  Calculated value  Value determination	Remark
Skin   Sk	damage Irritating hyl-4-piperidyl) [[: Result  Not irritating  Not irritating	405 OECD 404  3,5-bis(1,1-dimethylet) Method  Equivalent to OECD 405 Equivalent to OECD	3 minu minute hyl)-4-h Exposi	es ydroxyphen ure time	1; 24; 48; 72; 168 hours yl]methyl]butylmalo Time point	Rat nate	Calculated value	
Route of exposure	hyl-4-piperidyl) [[: Result  Not irritating  Not irritating	3,5-bis(1,1-dimethylet)  Method  Equivalent to OECD 405  Equivalent to OECD	minute hyl)-4-h Exposi	es ydroxyphen ure time	hours yl]methyl]butylmalo Time point	<u>nate</u>	Value	
Route of exposure  Eye  Skin  dioctylbis(pentane-2,4-  Route of exposure	Result  Not irritating  Not irritating	Method  Equivalent to OECD 405  Equivalent to OECD	Exposi	ure time	Time point			
Eye  Skin  dioctylbis(pentane-2,4-  Route of exposure	Not irrit <mark>ati</mark> ng	405 Equivalent to OECD	30 sec	onds			datarmination	Remark
Skin Idioctylbis(pentane-2,4-Route of exposure	Not irrit <mark>ati</mark> ng	405 Equivalent to OECD	30 sec	onas		Dalalait		
dioctylbis(pentane-2,4- Route of exposure		· ·				Rabbit	Experimental value	
Route of exposure	dionato-O,O')tin	404	24 h		24; 72 hours	Rabbit	Experimental value	
,								
	Result	Method	Exposi	ure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405			24; 72 hours	Rabbit	Experimental value	
	Not irritating	OECD 404	4 h		1 hour	Rabbit	Experimental value	
yrithione zinc			1				1 .	l
	Result	Method	Exposi	ure time	Time point	Species	Value determination	Remark
	Serious eye	OECD 405	24 h		24 hours	Rabbit	Experimental value	
	damage Not irrit <mark>ating</mark>	OECD 404	4 h		1; 24; 48; 72 hours	Rabbit	Experimental value	
Not classified as irritatin ratory or skin sensitisal NI Crystal Clear No (test)data on the min In the light of practical e	tion ixture available	lassification for this mi	xture is	less stringe	nt than the one base	d on the calculation	n set out	
rimethoxyvinylsilane								
Route of exposure R	esult	Method	Exposu	re time	Observation time point	Species	Value determination	Remark
Skin N	lot sens <mark>itizing</mark>	OECD 406				Guinea pig (male/female)	Experimental value	
3-(trimethoxysilyl)propy	ylamine							
Route of exposure R	esult	Method	Exposu	re time	Observation time point	Species	Value determination	Remark
Skin N	lot sens <mark>itizing</mark>	OECD 406	72 h			Guinea pig (male/female)	Experimental value	
	hul 4 ninoridul) [[	2 E his/1 1 dimothylat	hyl) 4 h	udrownhon				
Route of exposure R				re time	Observation time		Value determination	Remark
Skin N	lot sens <mark>itizing</mark>	Other					Experimental value	
lioctylbis(pentane-2,4-	dionata O Ollei					(male/female)		
Route of exposure R		Method	Exposu	re time	Observation time point	Species	Value determination	Remark
	ensitizin <mark>g</mark>	OECD 429				Mouse (female)	Experimental value	
			F	na Aires	Ohaama ti aa ti	Cuasia	Makes determine to la	Dama
oyrithione zinc			Exposu	re time	Observation time point	Species	Value determination l	Remark
Route of exposure R								
Route of exposure R		Method OECD 406				Guinea pig (female)	Experimental value	
Route of exposure R						(female)	Experimental value  Data waiving	
Route of exposure R	lot sens <mark>itizing</mark> zing for skin zing for inhalation	OECD 406				(female)		

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rimethoxyvi	s based on t	ille l'ele	varit ii	rigieuleitus							
	exposure	Parame	eter	Method	Value	Organ		Effect	Exposure time	Species	Value determinati
Oral (sto tube)	mach	LOAEL		OECD 422	62.5 mg/kg bw/day	Bladder		Histopathologica I changes	6 weeks (daily) - 8 weeks (daily)	Rat (male/female)	Experimenta value
Oral (sto	mach	LOAEL		OECD 422	250 mg/kg bw/day	Bladder		Histopathologica I changes	6 weeks (daily) - 8 weeks (daily)	Rat (male/female)	Experimenta value
Inhalatio (vapours		NOAEC		Subchronic toxicity test	100 ppm			No effect	14 weeks (6h/day, 5 days/week)		Experimenta value
-(trimethox		lamine		, , , , , , , , , , , , , , , , , , , ,					,.,	()	1
	exposure		eter	Method	Value	Organ		Effect	Exposure time	Species	Value determinati
Oral (sto tube)	mach	LOAEL		OECD 408	600 mg/kg bw/day	Liver		Clinical signs; mortality; body weight; food consumption	92 day(s)	Rat (male/female)	Read-across
Oral (sto tube)	mach	NOAEL		OECD 408	200 mg/kg bw/day	Liver			92 day(s)	Rat (male/female)	Read-across
	n (aerosol)	IRT (inhalat risk tes		Equivalent to OECD 412	147 mg/m³ air	Lungs		Lesions in larynx, trachea and lung	4 weeks (6h/day, 5 days/week)	Rat (male)	Read-across
is/1 2 2 6 6	nentameth			  } [[3 5-his/1 1-di	 imethylethyl\-4-h	vdrovynh	envilm	ethyl]butylmalon	ate		
	exposure			Method	Value	Organ	Спущи		Exposure time	Species	Value determinat
Oral (sto tube)	mach	LOAEL		OECD 421	10 mg/kg bw/day	Lymph n	odes	Enlargement of the lymph glands	28 day(s)	Rat (male/female)	Experiment value
Oral (sto tube)	mach	LOAEL		OECD 421	10 mg/kg bw/day	Liver		Enlargement/aff ection of the liver	28 day(s)	Rat (male/female)	Experimenta value
Oral (sto tube)	mach	LOAEL		OECD 421	10 mg/kg bw/day	Spleen		Spleen enlargement/aff ection	28 day(s)	Rat (male/female)	Experimenta value
ioctylbis(pe									_		
	exposure			Method	Value	Organ			Exposure time	Species	Value determinat
Oral (die	t)	NOAEL		OECD 422	0.3 mg/kg bw/day - 0.5 mg/kg bw/day	Thymus		No effect	28 day(s)	Rat (male/female)	Experiment value
Dermal											Data waivin
Inhalatio (vapours		NOEC		Equivalent to OECD 413	100 ppm			No effect	14 weeks (6h/day, 5 days/week)	(male/female)	Experiment value
Inhalatio (vapours		LOAEC		Equivalent to OECD 413	650 ppm	Various o	organs	Histopathology	14 weeks (6h/day, 5 days/week)	Rat (male/female)	Experiment value
yrithione zi				h		_		Luci i		<u>.</u>	L
		Parame		Method	Value	Organ			Exposure time	Species	Value determinat
Oral (sto tube)	macn	NOAEL		OECD 453	0.5 mg/kg bw/day		Д	No effect	98 weeks (daily) - 104 weeks (daily)	Rat (male/female)	Experiment value
Dermal		NOAEL		EPA OPP 82-3	100 mg/kg bw/day				13 weeks (6h/day, 5 days/week)	(male/female)	Experiment value
Dermal		LOAEL		EPA OPP 82-3	1000 mg/kg bw/day			changes	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experiment value
Inhalatio	n (dust)	LOAEL		EPA OPPTS 870.3465	6 mg/m³ air		N	Respiratory difficulties	3 weeks (6h/day, 5 days/week)	Rat (male/female)	Experiment value
Inhalatio	n (dust)	NOAEL		EPA OPPTS 870.3465	2 mg/m³ air			No effect	3 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimenta value
nclusion	16										
lot classified enicity (in v		OHIC TO	xicity								
joinetty (III )	ŕ										
ll Crystal Cle		xture av	ailabl	e							

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Deather with metabolic activation   DeED 478   CHL/IU cells   Chromosome aberrations   Superimental value   Supe	<u>trimethoxyvinylsilane</u>					
activation, positive without metabolic activation of the process o	Result	Method	Test substrate			Value determination
activation, negative with metabolic activation (pagitive with metabolic activation) (pagitive with metabolic activation) (pagitive with metabolic activation) (pagitive with metabolic activation) (pagitive without metabolic activation) (pagitive w	activation, positive without	OECD 473	CHL/IU cells	Chroi	mosome aberrations	Experimental value
Section   Residue   Method   Test substrate   Effect   Malue determination   Residue   Method   Test substrate   Effect   Malue determination   Residue   Method   Test substrate   Effect   Medical   Read-across	activation, negative without	OECD 476	Chinese hamste	er ovary (CHO)		Experimental value
Negative with metabolic activation, negative without metabolic activation, negative with metabolic activation, pastive without metabolic activation positive wi	activation, negative without	OECD 471	Bacteria (S.typh	imurium) No ef	fect	Experimental value
Result Negative with metabolic activation, negative without metabolic activation, negative without metabolic activation, negative without metabolic activation (Negative with metabolic activation)  Negative with metabolic activation  Negative with metabolic activation (Negative without metabolic activation)  Negative with metabolic activation  Negative						
Negative with metabolic activation, negative without metabolic activation, negative without metabolic activation, negative without metabolic activation   Seco 473		Method	Test substrate	Fffec:		Value determination
activation, negative without metabolic activation Negative with metabolic activation Postive with metabolic activation Postive with metabolic activation Postive with metabolic activation Postive with metabolic activation Negative with metabolic activation Negat	Negative with metabolic activation, negative without					
activation, negative without metabolic activation  Negative with metabolic activation  Positive with metabolic activation  Positive with metabolic activation  Positive with metabolic activation  Positive with metabolic activation  Negative with m	activation, negative without	OECD 473			fect	Read-across
activation, negative without metabolic activation    Signature   Metabolic activation   Metabolic activation   Metabolic activation   Megative with metabolic activation   Megative with metabolic activation   Megative without metabolic activation   Megative with metabolic activation   Megative without metabolic activation   Megative with metabolic activation   Megative with metabolic activation   Megative with metabolic activation   Megative with metabolic activation   Megative without metabolic activation   Megative without metabolic activation   Megative with metabolic activation   Metabolic ac	activation, negative without	OECD 471	Escherichia coli	No ef	fect	Experimental value
Result   Method   Test substrate   Effect   Value determination   Negative with metabolic activation   Positive with metabolic activation   Positive with metabolic activation   Positive with metabolic activation   DECD 473   Chinese hamster ovary (CHO)   Experimental value   CHO   CHO   Chinese hamster ovary (CHO)   Chinese hamster ovary (CHO)   Experimental value   CHO   CHO   CHO   Chinese hamster ovary (CHO)   CHO	activation, negative without metabolic activation		` '			Experimental value
Negative with metabolic activation, negative without metabolic activation, negative without metabolic activation, negative without metabolic activation, negative without metabolic activation positive with metabolic activation positive with metabolic activation positive with metabolic activation positive with metabolic activation  Positive with metabolic activation  Result  Negative with metabolic activation  Method  Test substrate  Method  Negative with metabolic activation  Negative with metabolic activation, negative without metabolic activation  Negative with metabolic activation, negative without metabolic activation, negative without metabolic activation  Negative with metabol						
activation, negative without metabolic activation Negative with metabolic activation Positive with metabolic activation Result Negative with metabolic activation, nositive without metabolic activation Negative with metabolic activation, negative without metabolic activation Negative with metabolic						Value determination
activation, negative without metabolic activation Positive with metabolic activation Positive with metabolic activation  Result Method Test substrate Effect Value determinati Negative with metabolic activation  Negative with metabolic activation Negative without metabolic activation Negative wit	activation, negative without	Ames test	Bacteria (S.typh	imurium) No ef	fect	Experimental value
activation, positive without metabolic activation    Result	activation, negative without metabolic activation	OECD 476			fect	Experimental value
Result Method Test substrate Effect Value determination Negative with metabolic activation, negative without metabolic activation (activation) and the substrate of the substrat	activation, positive without	OECD 473	Chinese hamste	er ovary (CHO)		Experimental value
Negative with metabolic activation, negative without metabolic activation, negative without metabolic activation  Negative with metabolic activation  No effect activation  No e						
activation, negative without metabolic activation  Negative with metabolic activation  Pyrithione zinc  Result  Negative with metabolic activation  Negative with metabolic ac					-	
activation, negative without metabolic activation  Negative with metabolic activation  Pyrithione zinc  Result  Negative with metabolic activation  Negative with metabolic activation  Negative with metabolic activation  Pyrithione zinc  Result  Negative with metabolic activation  N	activation, negative without	OECD 476		0	fect	Experimental value
activation, negative without metabolic activation    Pyrithione zinc	activation, negative without	OECD 473			fect	Experimental value
Result Method Test substrate Effect Value determination	activation, negative without	OECD 471	Bacteria (S.typh	imurium) No ef	fect	Experimental value
Negative with metabolic activation, negative without metabolic activation, negative without metabolic activation  Negative with metabolic activation  OECD 473  Chinese hamster lung fibroblasts (V79)  Chinese hamster lung fibroblasts (V79)  Megative with metabolic activation  Experimental value fibroblasts (V79)  No (the styleta Clear  No (test)data on the mixture available Judgement is based on the relevant ingredients  trimethoxyvinylsilane  Result  Method  Exposure time  Test substrate  Organ  Value dete	pyrithione zinc					
activation, negative without metabolic activation  Negative with metabolic occupance of fibroblasts (V79)  Negative with metabolic occupance of fibroblasts (V79)  Negative with metabolic occupance	Result	Method	Test substrate	Effec	t	Value determination
activation fibroblasts (V79)  Negative with metabolic activation CECD 473  All Crystal Clear No (test)data on the mixture available Judgement is based on the relevant ingredients  trimethoxyvinylsilane  Result Method Exposure time Test substrate Organ Value dete	activation, negative without metabolic activation	OECD 471		,		Experimental value
activation fibroblasts (V79)  Igenicity (in vivo)  All Crystal Clear  No (test)data on the mixture available  Judgement is based on the relevant ingredients  trimethoxyvinylsilane  Result Method Exposure time Test substrate Organ Value dete	activation		fibroblasts (V79	)		Experimental value
All Crystal Clear  No (test)data on the mixture available  Judgement is based on the relevant ingredients  trimethoxyvinylsilane    Result	activation	UECD 4/3			nosome aperfations	experimental value
Result Method Exposure time Test substrate Organ Value dete	All Crystal Clear No (test)data on the mixture ava Judgement is based on the relev					
Negative (Inhalation (vapours)) OECD 489 3 days (1x/day) Rat (female) Experiment		Method	Exposure time	Test substrate	Organ	Value determinati
	Negative (Inhalation (vapour	s)) OECD 489	3 days (1x/day)	Rat (female)		Experimental value
	for rovision: 2.2			-/	cation date: 201E 01 (	

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3-(trimethoxysilyl)propylamine

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD		Mouse (male/female)	Bone marrow	Read-across
	474				

dioctylbis(pentane-2,4-dionato-0,0')tin

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

ovrithione zinc

Result Me		Method	Exposure time	Test substrate	Organ	Value determination
Negative		OECD 474		Mouse (male/female)	Bone marrow	Experimental value

## Conclusion

Not classified for mutagenic or genotoxic toxicity

## Carcinogenicity

## Fix All Crystal Clear

No (test)data on the mixture available

Judgement is based on the relevant ingredients

3-(trimethoxysilyl)propylamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	. 3	Value determination
Dermal		Carcinogenic toxicity study	0,	(-		No carcinogenic effect		Inconclusive, insufficient data

pyrithione zinc

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	. 3.	Value determination
Oral	NOAEL	OECD 453	> 2.1 mg/kg bw	, ,		No carcinogenic effect		Experimental value

## Conclusion

Not classified for carcinogenicity

### Reproductive toxicity

## Fix All Crystal Clear

No (test)data on the mixture available
Judgement is based on the rele<mark>vant ingredients</mark>

 $\underline{\mathsf{trim}}\underline{\mathsf{ethoxyvinylsilane}}$ 

	Parameter	Method	Value	Exposure time	Species	Effect	9	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

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
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
Effects on fertility	NOAEL	OECD 408	600 mg/kg bw/day	92 day(s)	Rat (male/female)	No effect		Read-across

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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	- 3	Value determination
Developmental toxicity								Data waiving
Maternal toxicity								Data waiving
Effects on fertility	NOAEL	Equivalent to OECD 421	≥ 10 mg/kg bw/day	/ (- /	Rat (male/female)	No effect		Experimental value

dioctylbis(pentane-2,4-dionato-O,O')tin

	Parameter	Method	Value	Exposure time	Species	Effect	. 3	Value determination
Developmental toxicity (Oral (diet))	NOAEL		0.3 mg/kg bw/day - 0.5 mg/kg bw/day	28 day(s)	Rat	No effect		Experimental value
Maternal toxicity (Oral (diet))	NOAEL		0.3 mg/kg bw/day - 0.5 mg/kg bw/day	28 day(s)	Rat	No effect	,	Experimental value
Effects on fertility (Oral (diet))	NOAEL	OECD 422	0.3 mg/kg bw/day - 0.5 mg/kg bw/day	/ ( - /	Rat (male/female)	No effect		Experimental value

pyrithione zinc

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	LOAEL	EPA OPP 83-3	1.5 mg/kg bw/day	13 day(s)	Rabbit (female)	Increased post- implantation loss	Foetus	Experimental value
	NOAEL	EPA OPP 83-3	0.5 mg/kg bw/day	13 day(s)	Rabbit (female)	No effect		Experimental value
Maternal toxicity	LOAEL	EPA OPP 83-3	1.5 mg/kg bw/day	13 day(s)	Rabbit (female)	Weight changes		Experimental value
	NOAEL	EPA OPP 83-3	0.5 mg/kg bw/day	13 day(s)	Rabbit (female)	No effect		Experimental value
Effects on fertility	LOAEL (P/F1)	EPA OPPTS 870.3800	1.4 mg/kg bw/day - 2.8 mg/kg bw/day		Rat (male/female)	Reproductive performance		Experimental value
	NOAEL (P/F1)	EPA OPPTS 870.3800	0.7 - 1.4		Rat (male/female)	No effect		Experimental value

## Conclusion

Not classified for reprotoxic or developmental toxicity

## Toxicity other effects

Fix All Crystal Clear

No (test)data on the mixture available

Chronic effects from short and long-term exposure

Fix All Crystal Clear

No effects known.

## SECTION 12: Ecological information

## 12.1. Toxicity

Fix All Crystal Clear

No (test)data on the mixture available

Classification is based on the relevant ingredients

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	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)	Pseudokirchneriel la 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)		Semi-static system	Fresh water	Experimental value GLP
(trimethoxysilyl)propylamine								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determinati
Acute toxicity fishes	LC50	OECD 203	> 934 mg/l	96 h	Danio rerio	Semi-static system	Fresh water	Read-across; GLP
Acute toxicity crustacea	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 micro- organisms	EC50	Other	43 mg/l	5.75 h	Pseudomonas putida	Static system	Fresh water	Read-across; GLP
s(1,2,2,6,6-pentamethyl-4-piper	idyl) [[3,5-bis(1	L,1-dimethyleth	<mark>nyl)-4-</mark> hydroxyp	henyl]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)		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
octylbis(pentane-2,4-dionato-0,								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determinati
Acute toxicity fishes	LC50		71.1 mg/l	96 h	_	Flow-through system	Fresh water	Experimental value Nominal concentration
Acute toxicity crustacea	EC50		47.6 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value Nominal concentration
Toxicity algae and other aquatic	ErC50	OECD 201	32 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea								Data waiving
<u>rrithione zinc</u>								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determinati
Acute toxicity fishes	LC50	OECD 203	0.0104 mg/l	96 h	Brachydanio rerio			Experimental value
Acute toxicity crustacea	EC50	OECD 202	0.051 mg/l	48 h	Daphnia magna			Experimental value
Toxicity algae and other aquatic plants	EC50	OECD 201	0.051 mg/l	72 h	Pseudokirchneriel la subcapitata			Experimental value
	NOEC	OECD 201	0.0149 mg/l	72 h	Pseudokirchneriel la subcapitata			Experimental value
Long-term toxicity fish	NOEC	OECD 215	0.00125 mg/l		Brachydanio rerio			Experimental value
Long-term toxicity aquatic crustacea	NOEC	OECD 211	0.00213 mg/l		Daphnia magna			Experimental value
Toxicity aquatic micro-	EC50	OECD 209	2.4 mg/l	3 h	Activated sludge	Static system	1	Experimental value

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#### **Fix All Crystal Clear** Conclusion Harmful to aquatic life with long lasting effects. 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<sup>3</sup> Calculated value Half-life water (t1/2 water) Method Value Primary Value determination degradation/mineralisation 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 Value determination Primary degradation/mineralisation 4 h; pH = 7 Primary degradation bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate Biodegradation water Method Value determination Value Duration OECD 301B: CO2 Evolution Test 2 % 28 day(s) Experimental value dioctylbis(pentane-2,4-dionato-0,0')tin Biodegradation water Method Value Duration Value determination OECD 301F: Manometric Respirometry Test 9 %: GLP 28 day(s) Experimental value pyrithione zinc Biodegradation water Method Value Duration Value determination OECD 301B: CO2 Evolution Test 39 %; GLP 28 day(s) Experimental value OECD 303A: Activated Sludge Units ≥ 98.8 %; Activated sludge 35 day(s) Experimental value Phototransformation air (DT50 air) Method Value Conc. OH-radicals Value determination AOPWIN 8.69 h Calculated value Phototransformation water (DT50 water) Method Value Conc. OH-radicals Value determination Other < 7 minutes Experimental value Half-life water (t1/2 water) Method Value Value determination degradation/mineralisation EPA 161-1 Primary degradation 7.4 day(s) - 12.9 day(s); GLP Experimental value Conclusion Contains non readily biodegradable component(s) 12.3. Bioaccumulative potential Fix All Crystal Clear Log Kow Value Value determination Method Remark Temperature Not applicable (mixture) trimethoxyvinylsilane Log Kow Method Remark Value Temperature Value determination OSAR KOWWIN 20°C Calculated Reason for revision: 3.2 Publication date: 2015-01-06 Date of revision: 2018-11-29

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3-(trimethoxysilyl)p	<u>ropylamine</u>				
Log Kow					
Method		Remark	Value	Temperature	Value determination
			0.2	20 °C	QSAR
ois(1,2,2,6,6-pentar	methyl-4-pi <mark>pe</mark>	ridyl) [[3,5-bis(1,1-dim	<mark>nethylethyl)-4-</mark> hydroxypheny	l]methyl]butylmalonate	
BCF fishes				L .	No.
Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 30	5 24.3 - 437.	1 60 day(s)	Cyprinus carpio	Experimental value
Log Kow		-	<u> </u>	-	
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
lioctylbis(pentane-	-2,4-dionato-C	<u>,O')tin</u>			
Log Kow		<b>L</b>	h	-	h., .,
Method		Remark	Value	Temperature	Value determination
			0.6	25 °C	Calculated
oyrithione zinc					
BCF other aquation		h	b .:	b :	h., ., .,
Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 30		Fresh 30 day(s)	Crassostrea sp.	Experimental value
L V		weight			
Log Kow Method		Domark	Value	Tomporatura	Value determination
OECD 107		Remark	0.9	Temperature 25 °C	Experimental value
nclusion			0.9	25 C	Experimental value
Parameter			Method	Value	Value determination
					Data waiving
Volatility (Henry'			Tamananatura	Damani	Value determination
Value 8.72E-5 atm m <sup>3</sup>		Method	Temperature 25 °C	Remark	Estimated value
		wided\ [[2 F bis/1 1 disc	nethylethyl)-4-hydroxypheny	llmath dhut dmalanata	Estillated value
	петпут-4-ргре	110y1) [[3,5-bis(1,1-uill	ietnyietnyij-4-nyuroxypneny	<u>ijmetnyijbutyimaionate</u>	
(log) Koc Parameter			Method	Value	Value determination
			SRC PCKOCW		Calculated value
log Koc			She Peroevi	1N V2.0 5.04 - 8.1	Calculated value
oyrithione zinc (log) Koc					
Parameter			Method	Value	Value determination
Koc			OECD 106	1700 - 2500	
log Koc			0100 100	3.2 - 4.4	Calculated value
Volatility (Henry	s I aw constan	ıt H)		5.2	carcarated value
Value		Method	Temperature	Remark	Value determination
< 0.5E-4 Pa.m <sup>3</sup> /			i omporataro	Tionna.ii	Calculated value
10.52 11 4.111 /	11101				Calculated Value
malusian					
onclusion Contains componer	nt(s) that adea	rh(s) into the soil			
•					
		vB assessment			
Does not contain co	omponent(s) t	hat meet(s) the criter	ia of PBT and/or vPvB as liste	d in Annex XIII of Regulation (EC) N	lo 1907/2006.
2.6. Other adve	orsa affacts		1		
All Crystal Clear	SI SC CITECTS				
	use nases (Do	gulation (EU) No 517	/2014)		
-	-	-		s (Regulation (EU) No 517/2014)	
one-depleting pot				(	
		ozone laver (Regulati	on (EC) No 1005/2009)		
e diassilieu as udile	Serous for tile	ozone layer (Neguidil	on (EC) NO 1003/2003/		
on for revision: 3.2				Publication date:	2015-01-06

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#### 3-(trimethoxysilyl)propylamine

#### Groundwater

Groundwater pollutant

## **SECTION 13: Disposal considerations**

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

#### 13.1. Waste treatment methods

#### 13.1.1 Provisions relating to waste

#### **European Union**

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 04 09\* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

#### 13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

#### 13.1.3 Packaging/Container

#### **European Union**

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

15 01 10\* (packaging containing residues of or contaminated by dangerous substances).

## **SECTION 14: Transport information**

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

	1. UN number	 1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,
	Transport		Not subject	
111				

14.2.	Old brober shipping harrie	
1/12	Transport hazard class(os)	

4.5. Transport nazaru ciass(es)	
Hazard identification num <mark>ber</mark>	
Class	
Classification code	

14.4. Packing group

00 1		
Packing group		
Labels		

14.5. Environmental hazards

Environmentally hazardous substance mark no

14.6. Special precautions for user

Special provisions		/
Limited quantities		7

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

## 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		
4.6 %				
48.4 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.

See column 1: 3.

See column 1: 20.

See column 1: 40.

## National legislation Belgium

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No data available

dioctylbis(pentane-2,4-dionato-0,0')tin

Résorption peau

Etain (composés organiques de) (en Sn); D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.

#### National legislation The Netherlands

Fix All Crystal Clear No data available

## National legislation France

Fix All Crystal Clear No data available

#### National legislation Germany

Fix All Crystal Clear

-		
	WGK	2; 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

trimethoxyvinylsilane

UTITICUTORYVI	rryisharic	
TA-Luft	5.2.5	

3-(trimethoxysilyl)propylamine

TA-Luft 5.2.5

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

| TA-Luft | 5.2.1

TA-Luft 5.2.1

<u>dioctylbis(pentane-2,4-dionato-0,0')tin</u>

5.2.1

TA-Luft 5.2.5; I

pyrithione zinc

## National legislation United Kingdom

Fix All Crystal Clear No data available

dioctylbis(pentane-2,4-dionato-0,0')tin

Skin absorption	Tin compounds, organic, except Cyh	nexatin (ISO), (as Sn); Sk

#### Other relevant data

TA-Luft

Fix All Crystal Clear

No data available

dioctylbis(pentane-2,4-dionato-0,0')tin

TLV - Carcinogen	Tin organic compounds, as Sn; A4	
Skin absorption	Tin organic compounds, as Sn; Skin; Danger of cutaneous absorption	

## 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.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H371 May cause damage to organs (immune system) if swallowed.

H372 Causes damage to organs (liver, lymph nodes, spleen) through prolonged or repeated exposure.

H373 May cause damage to organs (immune system) through prolonged or repeated exposure if swallowed.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

(\*) 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 %

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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

	rl-4-piperidyl) [[3,5-bis(1,1- rphenyl]methyl]butylmalonate	10	Chronic	ECHA
pyrithione zinc		10	Acute	Customer information THOR (2014-10-27)
pyrithione zinc		1	Chronic	Customer information THOR (2014-10-27)

#### Specific concentration limits CLP

dioctylbis(pentane-	2,4-dionato-O,O')tin	C>5%	Skin Sens. 1; H317	TIB Chemicals

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. 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. 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 has been elaborated for use within the European Union, Switzerland, Iceland, Norway and Lichtenstein. It may be consulted in other countries, where local legislation with regards to the set-up of safety data sheets will take precedence. It is your obligation to verify and apply such local legislation. 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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