

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Berggau
Page 1 of 26

RALMO[®]-Montage FIX crystal clear

Section 1: Name of the substance or mixture and the company

1.1 Product identifier:

Trade name: Ralmo[®]-Montage FIX 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:

Use of the substance/mixture:

1.2.1 Relevant identified uses

Adhesive, sealing putty

1.2.2 Uses, to be avoided

No known uses advised against

1.3 Details of the supplier who provides the safety data sheet:

Company name: Ralmont GmbH
Street: Keltenring 16
City: D-92361 Berggau
Telephone: +49 (0)9181/516 40-20
E-Mail: info@ralmont.de · Contact Person: Mr. Niklas Weber
Internet: http://www.ralmont.de

1.4 Emergency number:

Poison Center Bonn, 24 hours, Tel. +49 (0) 228-19240

Section 2: Hazard Identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No. 1272/2008

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

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

2.2 Label elements:

Hazard pictograms

No pictogram

Signal word

No signal word

H-Wording

H412

Harmful to aquatic life with long lasting effects.

P-Wording

P101

If medical advice is needed, have container or label ready.

P102

Keep out of the reach of children.

P273

Avoid release into the environment.

P501

Dispose of contents / container to in accordance with local regulations.

2.3 Other dangers:

No other hazards known.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Berggau
Page 2 of 26

Section 3: Composition/ information on ingredients

3.1 Substances:

Not applicable

3.2 Mixtures:

Name REACH Registrierungs-nr.	CAS-Nr. EG-Nr.	Konz. (C)	Classification according to CLP	Footnote
Trimethoxyvinylsilane 01-2119513215-52	2768-02-7 220-449-8	1%<C<10%	Flam. Liq. 3; H226 Acute Tox. 4; H332	(1)(10)
3-(Trimethoxysilyl)propylamin 01-2119510159-45	13822-56-5 237-511-5	1%<C<3%	Skin Irrit. 2; H315 Eye Dam. 1; H318	(1)(10)
Pyrithione zinc 01-2119511196-46	13463-41-7 236-671-3	0.01%<C<0.1%	Acute Tox. 3; H301 Acute Tox. 4; H332 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)(9)
Bis (1,2,2,6,6-pentamethyl-4-piperidyl)-[[3,5-bis(1,1-dimethyl-ethyl)-4- hydroxyphenyl]methyl] butylmalonate 01-0000020199-67	63843-89-0 264-513-3	0.1%<C<1%	STOT RE 1; H372 Acute Tox. 4; H302 Aquatic Chronic 1; H410	(1)
Dioctylbis (pentan-2,4-dionato-O,O')tin 01-0000020199-67	54068-28-9 483-270-6	0.1%<C<1%	STOT SE 2; H371 STOT RE 2; H373 Skin Sens. 1; H317	(1)(8)(10)

- (1) For the full wording of the H-phrases: see point 16
 (8) Specific concentration limits, see point 16.
 (9) M-factor, see point 16.
 (10) Subject to the restrictions in Annex XVII of Regulation (EC) No 1907/2006.

Section 4: First aid measures

4.1 Description of first aid measures:

General information:

If you feel unwell, seek medical advice.

After inhalation:

Move victim to fresh air. Breathing difficulties: consult a doctor / medical service.

After skin contact:

Rinse with water. Use of soap is allowed. If irritation persists, consult a doctor.

After eye contact:

Rinse with water. Consult an ophthalmologist if irritation persists.

After swallowing:

Rinse mouth with water. If feeling unwell: Consult a doctor/medical service.

4.2 Important acute symptoms and delayed symptoms:

4.2.1 Acute symptoms

After inhalation:	No effects known.
After skin contact:	No effects known.
After eye contact:	No effects known.
After ingestion:	No effects known.

4.2.2 Delayed symptoms:

No effects known.

4.3 Indication of any immediate medical attention and special treatment needed:

If applicable and present, indicated below.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Bergau
Page 3 of 26

Section 5: Firefighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media:

Multigrade foam. Powder. Carbonic acid.

5.1.2 Unsuitable extinguishing media:

No known unsuitable extinguishing media.

5.2 Special hazards arising from the substance or mixture:

On combustion: Formation of CO, CO₂ and minor amounts of nitrous gases, hydrogen chloride.

5.3 Advice for firefighting:

5.3.1 Measures:

Exposure to environmentally hazardous firefighting water. Use water sparingly, collect/contain if possible.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective suit. In case of heating/combustion: Compressed air/oxygen equipment.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

No open fire.

6.1.1 Protective equipment for non-emergency personnel:

See item 8.2

6.1.2 Protective equipment for emergency services:

Gloves. Protective suit.

Suitable protective clothing: See section 8.2.

6.2 Environmental protection measures:

Collect released product. Contain released foam. Avoid soil and water contamination. Prevent product from entering sewage system. Prevent environmental contamination by suitable containment.

6.3 Methods and material for containment and cleaning up:

Cover spilled solid with sand/ pebbles. Collect solids in sealable containers. Clean contaminated surfaces abundantly with water. Hand in collected material to manufacturer/ competent authority.

6.4 Reference to other sections:

See section 13.

Section 7: Handling and storage

The information in this section is a general description. If applicable and available, the exposure scenarios are included in the annex. You must always use exposure scenarios related to the topic that correspond to your identified uses.

7.1 Precautions for safe handling:

Keep away from open flames/heat sources. Follow normal hygiene practices. Keep containers tightly closed. Do not pour waste down the sink.

7.2 Conditions for safe storage taking into account incompatibilities:

7.2.1 Conditions for safe storage:

Store at room temperature. Comply with legal requirements. Max. Storage time: 1 year.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Berggau
Page 4 of 26

7.2.2 Keep away from:

Heat sources

7.2.3 Suitable packaging material:

Plastic

7.2.4 Unsuitable packaging material:

No data available

7.3 Specific end uses:

If applicable and available, the exposure scenarios are included in the annex.
 Follow the manufacturer's instructions.

Section 8: Exposure controls / personal protection

8.1 Parameters to be monitored:

8.1.1 Workplace exposure

a) Limits for occupational exposure:

The limit values are listed below where available and applicable.

The Netherlands:

Tin organic compounds, as Sn	Time-weighted average exposure limit 8 h (Private workplace guideline limit value)	0.1 mg/m ³
	Kurzzeitwert (Private workplace guideline limit value)	0.2 mg/m ³

Belgium:

Etain (composés organiques de) (en Sn)	Time-weighted average exposure limit 8 h (Private workplace guideline limit value)	0.1 mg/m ³
	Short-term value	0.2 mg/m ³

USA (TLV ACGIH):

Tin organic compounds, as Sn	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.1 mg/m ³
	Short-term value (TLV - Adopted Value)	0.2 mg/m ³

France:

Etain (composés organiques d'), en Sn	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.1 mg/m ³
	Short-term value (VL: Valeur non réglementaire indicative)	0.2 mg/m ³

UK:

Tin compounds, organic, except Cyhexatin (ISO), (as Sn)	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.1 mg/m ³
	Short-term value (Workplace exposure limit (EH40/2005))	0.2 mg/m ³

b) National biological limits

The limits are listed below where available and applicable.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Bergau
Page 5 of 26

8.1.2 Sampling method

If applicable and available, this is indicated below.

8.1.3 Applicable limit values for the intended use

Limit values are listed below where available and applicable.

8.1.4 DNEL values:

Thresholds (DNEL/DMEL)	Type	Value	Comment
DNEL/DMEL - Employee			
<u>Trimethoxyvinylsilan</u>			
DNEL Systemic long-term effect, Inhalation		4.9 mg/m ³	
Systemic long-term effect, dermal		0.69 mg/kg bw/day	
<u>3-(Trimethoxysilyl)propylamin</u>			
DNEL Systemic long-term effect, Inhalation		58 mg/m ³	
Systemic long-term effect, dermal		8.3 mg/kg bw/day	
<u>Pyrithione Zinc</u>			
DNEL Systemic long-term effect, dermal		0.01 mg/kg bw/day	
<u>Bis (1,2,2,6,6-pentamethyl-4-piperidyl)-[[3,5-bis(1,1-dimethylethyl)-4- hydroxyphenyl]methyl]butylmalonate</u>			
DNEL Systemic long-term effect, Inhalation		0.05 mg/m ³	
Systemic long-term effect, dermal		0.07 mg/kg bw/day	
<u>Diocetylbis (pentane-2,4-dionato-O,O')tin</u>			
DNEL Systemic long-term effect, Inhalation		84 mg/m ³	
Acute Systemic effect, Inhalation		84 mg/m ³	
Local long-term effect, Inhalation		0.091 mg/m ³	
Systemic long-term effect, dermal		0.07 mg/kg bw/day	
DNEL/DMEL - General population			
<u>Trimethoxyvinylsilane</u>			
DNEL Systemic long-term effect, Inhalation		1.04 mg/m ³	
Acute Systemic effect, Inhalation		93.4 mg/m ³ /day	
Acute Systemic effect, dermal		0.3 mg/kg bw/day	
Acute Systemic effect, dermal 26.9mg/kg bw/day			
Systemic long-term effect, oral		0.3 mg/kg bw/day	
<u>3-(Trimethoxysilyl)propylamin</u>			
DNEL Systemic long-term effect, Inhalation		58 mg/m ³	
Systemic long-term effect, dermal		8.3 mg/kg bw/day	
Systemic long-term effect, oral		5 mg/kg bw/day	
<u>Bis (1,2,2,6,6-pentamethyl-4-piperidyl)-[[3,5-bis(1,1-dimethylethyl)-4- hydroxyphenyl]methyl]butylmalonate</u>			
DNEL Systemic long-term effect, Inhalation		0.01 mg/m ³	
Systemic long-term effect, dermal		33 µg/kg bw/day	
Systemic long-term effect, oral		3 µg/kg bw/day	

8.1.4 PNEC values:

Media	Value	Comment
<u>Trimethoxyvinylsilane</u>		
Fresh water	0.34 mg/l	
Sea water	0.034 mg/l	
Water (intermittent release)	3.4 mg/l	
STP 110 mg/l		
Freshwater sediment	1.24 mg/kg sediment dw	
Seawater sediment	0.12 mg/kg sediment dw	
Soil	0.052 mg/kg Soil dw	

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Berggau
Page 6 of 26

3-(Trimethoxysilyl)propylamin

Freshwater	0.33 mg/l
Seawater	0.033 mg/l
Water (intermittent release)	3.3 mg/l
STP	13 mg/l
Freshwater sediment	1.2 mg/kg sediment dw
Seawater sediment	0.12 mg/kg sediment dw
Soil	0.045 mg/kg soil dw
Oral	44.4 mg/kg soil dw

Pyrithione zinc

Freshwater	90 ng/l
Seawater	90 ng/l
STP	0.01mg/l
Freshwater sediment	0.0095 mg/kg sediment dw
Seawater sediment	0.0095 mg/kg sediment dw
Soil	8.85 mg/kg Soil dw

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

Fresh water	0 mg/l
Sea water	0 mg/l
Water (intermittent release)	0.61 mg/l
STP	1 mg/l
Freshwater sediment	504.4 mg/kg sediment dw
Seawater sediment	50.44 mg/kg sediment dw
Soil	1 mg/kg Soil dw

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

Freshwater	0.026 mg/l
Sea water	0.0026 mg/l
Water (intermittent release)	0.26 mg/l
STP	1 mg/l
Freshwater sediment	0.155 mg/kg sediment dw
Seawater sediment	0.0155 mg/kg sediment dw
Soil	0.0158 mg/kg Soil dw

8.1.5 Control banding:

If applicable and available, this is indicated below.

8.2 Exposure limit and monitoring exposure:

The information contained in this section is a general description. When applicable and available, the exposure scenarios are included in the appendix. You must always use exposure scenarios appropriate to your identified uses.

8.2.1 Suitable technical control equipment:

Keep away from open flames/heat sources.

8.2.2 Individual protection measures, for example personal protective equipment:

Follow normal hygiene practices. Keep containers tightly closed. Do not eat, drink or smoke while working.

Respiratory protection: Respiratory protection not required for normal handling.

Hand protection: Gloves.

Eye protection: Eye protection not required for normal handling.

Skin protection: Protective clothing.

8.2.3 Limitation and monitoring of the environmental exposition:

See section 6.2, 6.3 and 13.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Berggau
Page 7 of 26

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance	Paste
Odor Almost	Odorless
Odor threshold	No data available
Color Product	Color is composition dependent
Particle size	No data available
Explosion limits	No data available
Flammability	Slightly 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
Flash point	No data available
Evaporation rate	No data available
Vapor pressure	No data available
Solubility Water ;	Insoluble
Relative density	1.045
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosion hazard	No chemical group associated with explosive properties.
Oxidizing properties	No chemical group associated with oxidizing properties.
pH	No data available

9.2 Additional information:

Surface tension	No data available
Absolute density	1045 kg/m ³

Section 10: Stability and reactivity

10.1 Reactivity:

When heated: increased fire hazard.

10.2 Chemical stability:

Stable under normal conditions.

10.3 Possibility of hazardous reactions:

No data available.

10.4 Conditions to avoid:

No data available.

10.5 Incompatible materials:

No data available.

10.6 Hazardous decomposition products:

On combustion: Formation of CO, CO₂ and minor amounts of nitrous gases, hydrogen chloride.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Bergau
Page 8 of 26

Section 11: Toxicological information

11.1 Information on toxicological effects:

11.1.1 Testing results

Acute toxicity:

RALMO®-Montage FIX crystal clear

No (experimental) data available on the mixture.

Trimethoxyvinylsilane

Exposure route	Parameter	Method	Value	Exposure time	Species	Value determination	Comment
Oral	LD50	Equivalent with OECD 401	7120 mg/kg		Rat (male)	Experimental value	
Oral	LD50	Equivalent with OECD 401	7236 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50	Equivalent with OECD 402	3,36 ml/kg bw	24 Hrs	Rabbit (female)	Experimental value	
Dermal	LD50	Equivalent with OECD 402	4 mg/kg bw	24 Week(s)	Rat (male/female)	QSAR	
Inhalation (vapors)	LC50	Equivalent with OECD 403	16,8 mg/l	4 Hrs	Rat (male/female)	Experimental value	

3-(Trimethoxysilyl)propylamin

Exposure route	Parameter	Method	Value	Exposure time	Species	Value determination	Comment
Oral	LD50	Equivalent with OECD 401	2970 ml/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Equivalent with OECD 402	11,3 ml/kg bw	24 Hrs	Rabbit (male)	Experimental value	
Inhalation (vapors)	LD50	OECD 403	>5 ppm	6 Hrs	Rat (male)	Read-across	
Inhalation (vapors)	LC50	OECD 403	>16 ppm	6 Hrs	Rat (female)	Read-across	

Pyrrithione zinc

Exposure route	Parameter	Method	Value	Exposure time	Species	Value determination	Comment
Oral	LD50	OECD 401	269 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	EPA OPP 81-2	>2000 mg/kg	24 Hrs	Rat (male/female)	Experimental value	
Inhalation (vapors)	LD50	OECD 403	1,03 mg/l Air	4 Hrs	Rat (male/female)	Experimental value	

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

Exposure route	Parameter	Method	Value	Exposure time	Species	Value determination	Comment
Oral	LD50	Equivalent with OECD 401	1490 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Equivalent with OECD 402	>3170 mg/kg bw	24 Hrs	Rat (male/female)	Experimental value	
Inhalation (vapors)	LD50	Equivalent with OECD 403	>460 mg/m ³ Air	4 Hrs	Rat (male/female)	Experimental value	

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Berggau
Page 9 of 26

Diocetylbis (pentan-2,4-dionato-O,O')tin

Exposure route	Parameter	Method	Value	Exposure time	Species	Value determination	Comment
Oral	LD50	OECD 423	2500 mg/kg		Rat (female)	Experimental value	
Dermal	LD50	OECD 402	>2000 mg/g	24 Hrs	Rat (male/ female)	Experimental value	
Inhalation (vapors)	LD50	Equivalent with OECD 403	1224 ppm	4 Hrs	Rat (male/ female)	Experimental value	

Assessment is based on the relevant components.

Conclusion

Not classified for acute toxicity.

Irritation and etch effects on the skin

RALMO®-Montage FIX crystal clear

No (experimental) data available on the mixture.

Trimethoxyvinylsilane

Exposure route	Result	Method	Exposure time	Time	Species	Value determination	Comment
Eye	No irritation	OECD 405	24 Hrs	1; 24; 48; 72 Hours	Rabbit	Experimental value	
Skin	No irritation		24 Hrs	24; 48; 72 Hours	Rabbit	Experimental value	

3-(Trimethoxysilyl)propylamin

Exposure route	Result	Method	Exposure time	Time	Species	Value determination	Comment
Eye	Severe eye damage	Equivalent with OECD 405		24; 48; 72 Hours	Rabbit	Experimental value	
Skin	Irritation	OECD 404	3 Minutes – 240 Minutes	1; 24; 48; 72; 168 Hours	Rabbit	Experimental value	

Pyrrithione zinc

Exposure route	Result	Method	Exposure time	Time	Species	Value determination	Comment
Eye	Severe eye damage	OECD 405	24 Hrs	24 Hours	Rabbit	Experimental value	
Skin	No irritation	OECD 404	4 Hrs	1; 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

Exposure route	Result	Method	Exposure time	Time	Species	Value determination	Comment
Eye	No irritation	Equivalent with OECD 405	30 Seconds	24; 48; 72 Hours	Rabbit	Experimental value	
Skin	No irritation	Equivalent with OECD 404	24 Hrs	24; 72 Hours	Rabbit	Experimental value	

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Berggau
Page 10 of 26

Diocetylbis (pentan-2,4-dionato-O,O')tin

Exposure route	Result	Method	Exposure time	Time	Species	Value determination	Comment
Eye	No irritation	OECD 405		24; 72 Hours	Rabbit	Experimental value	
Skin	No irritation	OECD 404	4 Hrs	1 Hrs	Rabbit	Experimental value	

Based on practical experience, this mixture was classified less strictly in comparison with the calculation method.

Conclusion

Not classified as an eye irritant.
 Not classified as irritant to skin.
 Not classified as irritant to the respiratory system.

Sensitization of the respiratory system and skin

RALMO®-Montage FIX crystal clear
 No (experimental) data available on the mixture.

Trimethoxyvinylsilane

Exposure route	Result	Method	Exposure time	Observation time	Species	Value determination	Comment
Skin	Not Sensitizing	OECD 406		24; 48 Hours	Guinea Pig (male/female)	Experimental value	

3-(Trimethoxysilyl)propylamin

Exposure route	Result	Method	Exposure time	Observation time	Species	Value determination	Comment
Skin	Not Sensitizing	OECD 406	72 Hrs	24; 48 Hours	Guinea Pig (male/female)	Experimental value	

Pyrrithione zinc

Exposure route	Result	Method	Exposure time	Observation time	Species	Value determination	Comment
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

Exposure route	Result	Method	Exposure time	Observation time	Species	Value determination	Comment
Skin	Not Sensitizing	Other			Guinea Pig (male/female)	Experimental value	

Diocetylbis (pentan-2,4-dionato-O,O')tin

Exposure route	Result	Method	Exposure time	Observation-time	Species	Value determination	Comment
Skin	Sensitizing	OECD 429			Mouse (female)	Experimental value	

Assessment is based on the relevant components.

Conclusion

Not classified as sensitizing to skin.
 Not classified as sensitizing by inhalation.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015

Revised: 25.04.2016

Version:

Ralmont GmbH

92361 Bergau

Page 11 of 26

Specific target organ toxicity

RALMO®-Montage FIX crystal clear

No (experimental) data available on the mixture.

Trimethoxyvinylsilane

Exposure route	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL	OECD 422	62.5 mg/kg bw/day	Thymus	Weight reduction	6 Weeks (daily) 8 Weeks (daily)	Rat (female)	Experimental value
Inhalation (dusts)	LOAEC	Subchronic toxicity testing	100 ppm		Change in urine composition	14 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male)	Experimental value
Inhalation (Dämpfe)	NOAEC	Subchronic toxicity testing	10 ppm			14 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Experimental value

3-(Trimethoxysilyl)propylamin

Exposure route	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL	OECD 408	600 mg/kg bw/day	Liver	Clinical Symptoms; mortality; Body weight; Food consumption	92 Day(s)	Rat (male/female)	Read-across
Oral (stomach tube)	NOAEL	OECD 408	200 mg/kg bw/day	Liver	No effect	92 Day(s)	Rat (male/female)	Read-across
Inhalation (Aerosol)	Testing of the inhalation hazard	Equivalent with OECD 412	147 mg/m ³ Air	Lung	Lesions in the larynx, the trachea and the lung	4 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Read-across

Pyrrhione zinc

Exposure route	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 453	0.5 mg/kg bw/day		No effect	98 Weeks (daily) 104 Weeks (daily)	Rat (male/female)	Experimental value
Dermal	NOAEL	EPA OPP 82-3	100 mg/kg bw/day		No effect	13 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Experimental value
Dermal	LOAEL	EPA OPP 82-3	1000 mg/kg bw/day		Hematology Changes	13 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Experimental value
Inhalation (dusts)	LOAEL	EPA OPPTS 870.3456	6 mg/m ³ Air		Respiratory problems	3 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Experimental value
Inhalation (dusts)	NOAEL	EPA OPPTS 870.3456	2 mg/m ³ Air		No effect	3 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Experimental value

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Berggau
Page 12 of 26

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

Exposure route	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL	OECD 421	10 mg/kg bw/day	Lymph-node	Enlargement of the Lymph nodes	28 Day(s)	Rat (male/female)	Experimental value
Oral (stomach tube)	LOAEL	OECD 421	10 mg/kg bw/day	Liver	Enlargement/ Damage to the liver	28 Day(s)	Rat (male/female)	Experimental value
Oral (stomach tube)	LOAEL	OECD 421	10 mg/kg bw/day	spleen	Enlargement/ Damage to the Spleen	28 Day(s)	Rat (male/female)	Experimental value

Diocetyl bis (pentan-2,4-dionato-O,O')tin

Exposure route	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL	OECD 422	0.3 mg/kg bw/day- 0.5 mg/kg bw/day	Thymus	No effect	28 Day(s)	Rat (male/female)	Experimental value
Dermal								Data waiver
Inhalation (vapors)	NOAEL	Equivalent with OECD 413	100 ppm		No effect	14 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Experimental value
Inhalation (vapors)	LOAEL	Equivalent with OECD 413	650 ppm	Diverse Organs	Histopathology	14 Weeks (6 Hrs/Day 5 Days/Week)	Rat (male/female)	Experimental value

Assessment is based on the relevant components.

Conclusion

Not classified for subchronic toxicity.

Germ cell mutagenicity (in vitro)

RALMO®-Montage FIX crystal clear

No (experimental) data available on the mixture.

Trimethoxyvinylsilane

Result	Method	Test substrate	Effect	Value determination
Positive with Metabolic activation, positive without Metabolic activation	OECD 473	CHL/IU cells	Chromosomal aberrations	Experimental value
Negative with Metabolic activation, negative without Metabolic activation	OECD 476	Ovaries of the Chinese hamster	No effect	Experimental value
Negative with Metabolic activation, negative without Metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015

Revised: 25.04.2016

Version:

Ralmont GmbH

92361 Berggau

Page 13 of 26

3-(Trimethoxysilyl)propylamin

Result	Method	Test substrate	Effect	Value determination
Negative with Metabolic activation, negative without Metabolic activation	OECD 476	Ovaries of the Chinese hamster	No effect	Read-across
Negative with Metabolic activation, negative without Metabolic activation	OECD 473	Ovaries of the Chinese hamster	No effect	Read-across
Negative with Metabolic activation, negative without Metabolic activation	OECD 471	Escherichia coli	No effect	Experimental value
Negative with Metabolic activation, negative without Metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Pyrrithione zinc

Result	Method	Test substrate	Effect	Value determination
Negative with Metabolic activation, negative without Metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value
Negative with Metabolic activation	OECD 476	Lung fibroblasts of the Chinese hamster	No effect	Experimental value
Negative with Metabolic activation	OECD 473	Lung fibroblasts of the Chinese hamster	Chromosomal aberrations	Experimental value

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	Ovaries of the Chinese hamster	No effect	Experimental value
Negative with Metabolic activation, negative without Metabolic activation	OECD 473	Lung fibroblasts of the Chinese hamster		Experimental value

Diocetylbis (pentan-2,4-dionato-O,O')tin

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 476	Lung fibroblasts of the Chinese hamster	No effect	Experimental value
Negative	OECD 473	Lung fibroblasts of the Chinese hamster	No effect	Experimental value
Negative	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015

Revised: 25.04.2016

Version:

Ralmont GmbH

92361 Berggau

Page 14 of 26

Germ cell mutagenicity (in vivo)

 RALMO[®]-Montage FIX crystal clear

No (experimental) data available on the mixture.

Trimethoxyvinylsilane

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

3-(Trimethoxysilyl)propylamin

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

Pyrithione zinc

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

Diocetylbis (pentan-2,4-dionato-O,O')tin

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

Carcinogenicity

 RALMO[®]-Montage FIX crystal clear

No (experimental) data available on the mixture.

3-(Trimethoxysilyl)propylamin

Expositions-wert	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Dermal	NOAEL	Carcinogenic toxicity study	43.8 mg/Week	104 Weeks (3x/Week)	Mouse (male/female)	No carcinogenic effect	Skin	Inconclusive, insufficient data

Pyrithionzink

Expositions-wert	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	NOAEL	OECD 453	>2.1mg/kg bw	104 Weeks (daily)	Rat (male/female)	No carcinogenic effect		Experimental value

Reproduction toxicity:

 RALMO[®]-Montage FIX crystal clear

No (experimental) data available on the mixture.

Trimethoxyvinylsilane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	EPA OTS 798.4350	100 ppm	10 Days (6Hrs/day)	Rat (female)	No effect		Experimental value
Maternal Toxicity	NOAEL	EPA OTS 798.4350	25 ppm	10 Days (6Hrs/day)	Rat (female)	No effect		Experimental value
Effects on Fertility	NOAEL (P)	OECD 422	1000mg/kg bw/day	8 Week(s)	Rat (male)	No effect		Experimental value
Effects on Fertility	NOAEL (P)	OECD 422	250	6 Week(s)	Rat (female)	No effect		Experimental value

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015

Revised: 25.04.2016

Version:

Ralmont GmbH

92361 Berggau

Page 15 of 26

3-(Trimethoxysilyl)propylamin

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	EPA OTS 798.4900	100mg/kg bw/day	14 Days (Pregnancy, daily)	Rat	No effect		Read-across
Developmental toxicity	LOAEL	EPA OTS 798.4900	600mg/kg bw/day	14 Days (Pregnancy, daily)	Rat	Minor Skeletal changes	Skeleton	Read-across
Maternal Toxicity	NOAEL	Other	100mg/kg bw/day	14 Day(s)	Rat	No effect		Read-across
Maternal Toxicity	LOAEL	Other	600mg/kg bw/day	14 Day(s)	Rat	Clinical symptoms; mortality, body weight; Food consumption	General	Read-across
Effects on Fertility	NOAEL	OECD 408	600mg/kg bw/day	92 Day(s)	Rat (male/female)	No effect		Read-across

Pyrrithione zinc

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

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 waiver
Maternal Toxicity								Data waiver
Effects on Fertility	NOAEL	Equivalent with OECD 421	≥10mg/kg bw/day	36 Day(s)-50 Day(s)	Rat (male/female)	No effect		Experimental value

Safety Data Sheet

Revised: 25.04.2016

92361 Berngau

Page 16 of 26

Diethylbis (pentan-2,4-dionato-O,O')tin

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Maternal Toxicity	NOAEL	OECD 422	0.3mg/kg bw/day-0.5 mg/kg bw/day	28 Day(s)	Rat	No effect	Thymus	Experimental value
Effects on Fertility	NOAEL	OECD 422	0.3mg/kg bw/day-0.5 mg/kg bw/day	28 Day(s)	Rat (male/female)	No effect		Experimental value

Assessment is based on the relevant components.

Conclusion CMR

Not classified for reproductive or developmental toxicity.

Not classified for mutagenic toxicity or genotoxicity.

Not classified for carcinogenicity.

Toxicity of other effects

RALMO®-Montage FIX crystal clear

No (experimental) data available on the mixture.

Chronic effects from short and long-term exposure

RALMO®-Montage FIX crystal clear

No effects known.

Section 12: Environmental information

12.1 Toxicity:

RALMO®-Montage FIX crystal clear

No (experimental) data available on the mixture.

Trimethoxyvinylsilane

[illegible]

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Bergau
Page 17 of 26

3-(Trimethoxysilyl)propylamin

	Parameter	Method	Value	Duration	Species	Test plan	Fresh-/Saltwater	Value determination
Acute toxicity fish	LC50	OECD 203	>934mg/l	96 Hrs	Onocorhynchus mykiss	Semistatic System	Freshwater	Read-across; GLP
Acute toxicity invertebrates	EC50	OECD 202	331mg/l	48 Hrs	Daphnia magna	Semistatic System	Freshwater	Read-across; GLP
Toxicity Algae and other aquatic plants	EC50	EU Method C.3	>1000mg/l	72 Hrs	Pseudokirchneriella subcapitata	Semistatic System	Freshwater	Read-across; GLP
Toxicity aquatic Microorganisms	EC50	Other	43mg/l	5,75 Hrs		Semistatic System	Freshwater	Read-across; GLP

Pyrithione zinc

	Parameter	Method	Value	Duration	Species	Test plan	Fresh-/Saltwater	Value determination
Acute toxicity fish	LC50	OECD 203	0.0104mg/l	96 Hrs	Brachydanio rerio			Experimental value
Acute toxicity invertebrates	EC50	OECD 202	0.051mg/l	48 Hrs	Daphnia magna			Experimental value
Toxicity Algae and other aquatic plants	EC50	OECD 201	0.051mg/l	72 Hrs	Pseudokirchneriella subcapitata			Experimental value
Toxicity Algae and other aquatic plants	NOEC	OECD 201	0.0149mg/l	72 Hrs	Pseudokirchneriella subcapitata			Experimental value
Chronic Toxicity Fish	NOEC	OECD 215	0.00125 mg/l		Brachydanio rerio			Experimental value
Chronic toxicity invertebrates	NOEC	OECD 211	0.00213 mg/l	21 Day(s)	Daphnia magna			Experimental value
Toxicity aquatic Microorganisms	EC50	OECD 209	2.4mg/l	3 Hrs	Activated sludge	Static System		Experimental value; GLP

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 plan	Fresh-/Saltwater	Value determination
Acute toxicity fish	LC50	OECD 203	>100mg/l	96 Hrs	Danio rerio	Semistatic System	Freshwater	Experimental value; GLP
Toxicity Algae and other Aquatic plants	EC50	Other	61mg/l	72 Hrs	Scenedesmus subspicatus	Static System	Freshwater	Experimental value; Biomass
Chronic toxicity invertebrates	NOEC	OECD 211	2µg/l	21 Day(s)	Daphnia magna	Semistatic System	Freshwater	Experimental value; GLP
Toxicity aquatic Microorganisms	IC50	OECD 209	>100mg/l	3 Hrs	Activated sludge	Static System	Freshwater	Experimental value

Diocetylbis (pentan-2,4-dionato-O,O')tin

	Parameter	Method	Value	Duration	Species	Test plan	Fresh-/Saltwater	Value determination
Acute toxicity fish	LC50	OECD 203	86mg/l	96 Hrs	Pisces	Static System		Experimental value
Acute toxicity invertebrates	EC50	OECD 202	58.6mg/l	48 Hrs	Daphnia magna	Static System		Experimental value
Toxicity Algae and other aquatic plants	EC50	OECD 201	300mg/l	24 Hrs	Scenedesmus subspicatus	Static System		Experimental value

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Bergau
Page 18 of 26

Classification is based on the relevant ingredients.

Conclusion:

Harmful to aquatic organisms, with long lasting effects.

12.2 Persistence and degradability:

Trimethoxyvinylsilane

Biodegradability Water

Method	Value	Duration	Value determination
OCED 301F: Manometric respiration test	51%; GLP	28 Day(s)	Experimental value

Phototransformation Air (DT50 Air)

Method	Value	Conc. OH-Radical	Value determination
	0,56 Day(s)	50000/ cm ³	Calculation value

Half-life water (t1/2 water)

Method	Value	Primary mining/mineralization	Value determination
OCED 111: Hydrolysis as a function of the pH value	<2,4 Hrs; pH=7	Primary degradation	Evidential value

3-(Trimethoxysilyl)propylamin

Biodegradability Water

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

Half-life water (t1/2 water)

Method	Value	Primary mining/mineralization	Value determination
	4 Hrs; pH=7	Primary degradation	QSAR

Pyrrithione zinc

Biodegradability Water

Method	Value	Duration	Value determination
OCED 301B: CO2 Development test	39%; GLP	28 Day(s)	Experimental value
OECD 303A	≥98.8%; Activated sludge	35 Day(s)	Experimental value

Phototransformation Air (DT50 Air)

Method	Value	Conc. OH-Radical	Value determination
AOPWIN	8,69 Hrs		Calculation value

Phototransformation water (DT50 water)

Method	Value	Conc. OH-Radical	Value determination
Other	<7 Minutes		Experimental value

Half-life water (t1/2 water)

Method	Value	Primary mining/mineralization	Value determination
EPA 161-1	7.4 Day(s) - 12,9 Day(s) ; GLP	Primary degradation	Experimental value

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

Biodegradability Water

Method	Value	Duration	Value determination
OCED 301B: CO2 Development test	2%	28 Day(s)	Experimental value

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Berggau
Page 19 of 26

Diocetylbis (pentan-2,4-dionato-O,O')tin

Biodegradability Water

Method	Value	Duration	Value determination
OCED 301F: Manometric respiration test	9%; GLP	28 Day(s)	Experimental value

Conclusion:

Contains not readily biodegradable component(s).

12.3 Bio accumulative potential:

RALMO®-Montage FIX crystal clear

Log Know

Method	Comment	Value	Temperature	Value determination
	Not applicable (mixture)			

Trimethoxyvinylsilane

BCF other water organisms

Parameter	Method	Value	Duration	Species	Value determination
					Data waiver

Log Know

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

3-(Trimethoxysilyl)propylamin

Method	Comment	Value	Temperature	Value determination
		-2	20°C	QSAR

Pyrithione zinc

BCF other water organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	7.87-11	30 Day(s)	Crassostrea sp.	Experimental value

Log Know

Method	Comment	Value	Temperature	Value determination
OECD 107		0.9	25°C	Experimental value

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

BCF Fish

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

Log Know

Method	Comment	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

Diocetylbis (pentan-2,4-dionato-O,O')tin

Log Know

Method	Comment	Value	Temperature	Value determination
	No data available			

Conclusion:

Contains no bioaccumulative component(s).

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Bergau
Page 20 of 26

12.4 Mobility in soil:

Trimethoxyvinylsilane (log) K_{oc}

Parameter	Method	Value	Value determination
			Data waiver

Volatility (Henry constant H)

Value	Method	Temperature	Comment	Value determination
8.27E-5 atm m ³ /mol		25°C		Estimated value

Pyrrithione zinc (log) K_{oc}

Parameter	Method	Value	Value determination
K _{oc}	OECD 106	1700-25000	Experimental value
Log K _{oc}		3.2-4.4	Calculation value

Volatility (Henry constant H)

Value	Method	Temperature	Comment	Value determination
<0.5E Pa. m ³ /mol				Calculation value

Bis (1,2,2,6,6-pentamethyl-4-piperidyl)-[[3,5-bis(1,1-dimethylethyl)-4- hydroxyphenyl]methyl]butylmalonate (log) K_{oc}

Parameter	Method	Value	Value determination
K _{oc}	SRC PCKOCWIN v2.0	3.04-8.1	Calculation value

Conclusion:

Contains component(s) that adsorbs to soil.

12.5 Results of PBT- and vPvB-assessment:

Does not contain any components meeting the PBT and/or vPvB criteria in Annex XIII of Regulation (EC) No 1907/2006.

12.6 Other harmful effects:

RALMO®-Montage FIX crystal clear

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

None of the known components are included in the list of fluorinated greenhouse gases (Regulation (EU) No. 517/2014).

Ozone Depletion Potential (ODP) (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No. 1005/2009).

3-(Trimethoxysilyl)propylamine

Groundwater

Groundwater hazardous

Section 13: Disposal considerations

The information in this section is a general description. If applicable and available, the exposure scenarios are included in the annex. You must always use exposure scenarios related to the topic that correspond to your identified uses.

13.1 Waste treatment methods:

13.1.1 Waste regulations

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

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

08 04 09* (Waste from MFSU of adhesives and sealants (including water-repellent materials); waste adhesives and sealant wastes containing organic solvents or other hazardous substances). Depending on the industry and the production process, other waste codes may be applicable.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Bergau
Page 21 of 26

13.1.2 Disposal information:

Recover/reuse. Dispose of waste in accordance with local and/or national regulations.
Hazardous waste should not be mixed with other waste. Different types of hazardous waste should not be mixed if this may cause pollution or lead to problems in the further processing of the waste. Hazardous waste must be handled responsibly.
All facilities that store, transport or handle hazardous waste must take the necessary measures to avoid the risk of contamination or harm to people or animals.
Do not discharge into drains or the environment.

13.1.3 Packaging:

Waste Code Container (Directive 2008/98/EC).
15 01 10* (Packaging containing residues of or contaminated by dangerous substances).

13.1.4 Disposal of contaminated containers:

Empty container completely.
Hand over to approved disposal company.
Recommended cleaning: Cleaning by recycler or specialist company

Section 14: Transport information

Street (ADR)

14.1. UN-Number

Transport: Not subject to

14.2 UN proper shipping name:

14.3 Transport hazard classes:

Number identifying the hazard:
Class:
Classification code:

14.4 Packing group:

Packing group :
Hazard label:

14.5 Environmental hazards:

Environmentally hazardous substances label: No

14.6 Special precautions for users:

Special precautions:
Limited quantities:

Train (RID)

14.1. UN-Number

Transport: Not subject to

14.2 UN proper shipping name:

14.3 Transport hazard classes:

Number identifying the hazard:
Class:
Classification code:

14.4 Packaging group:

Packaging group:
Hazard label:

14.5 Environmental hazards:

Environmentally hazardous substances label: No

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Bergau
Page 22 of 26

14.6 Special precautions for users:

Special precautions:
Limited quantities:

Inland waterways (ADN)

14.1 UN-Number

Transport: Not subject to

14.2 UN proper shipping name:

14.3 Transport hazard classes:

Class:
Classification code:

14.4 Packaging group:

Packaging group:
Hazard label:

14.5 Environmental hazards:

Environmentally hazardous substances label: No

14.6 Special precautions for users:

Special precautions:
Limited quantities:

Sea (IMDG/IMSBC)

14.1 UN-Nummer:

Transport: Not subject to

14.2 UN proper shipping name:

14.3 Transport hazard classes:

Class:

14.4 Packaging group:

Packaging group:
Hazard label:

14.5 Environmental hazards:

Marine pollutant: -
Environmentally hazardous substance label no

14.6 Special precautions for users:

Special precautions:
Limited quantities:

14.7 Transport in bulk according to Annex II of MARPOL73 / 78 and the IBC Code

Annex II of MARPOL 73/78

Air (ICAO-TI/IATA-DGR)

14.1 UN-Nummer:

Transport: Not subject to

14.2 UN proper shipping name:

14.3 Transport hazard classes:

Class:

14.4 Packaging group:

Packaging group:
Hazard label:

14.5 Environmental hazards:

Environmentally hazardous substance label: No

14.6 Special precautions for users:

Special precautions:
Passenger and Cargo Aircraft: Limited quantities: maximum total quantity allowed per package:

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Berggau
Page 23 of 26

Section 15: Legislation

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

European legislation:

FOV content Directive 2010/75/EU

FOV content: 5.175%

FOV content: 54.08 g/l

REACH Annex XVII - Restriction

Contains component(s) subject to the restrictions in Annex XVII of Regulation (EC) No 1907/2006:

Restrictions on the manufacture, placing on the market and processing of certain dangerous substances, mixtures and articles.

<p>-trimethoxyvinylsilane-3-(trime-thoxysilyl)propylamine-dioctylbis (pentane2,4- dionato-O,O')tin</p>	<p>Liquid substances or mixtures that are considered hazardous according to Directive 1999/45/EC or meet the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:</p> <p>(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;</p> <p>(b) hazard categories 3.1 to 3.6, 3.7</p> <p>Impairment of sexual function and fertility and development, 3.8 except narcotic effects, 3.9 and 3.10;</p> <p>(c) hazard class 4.1;</p> <p>(d) hazard class 5.1.</p>	<p>1. must not be used</p> <ul style="list-style-type: none"> - in decorative objects intended to produce light or color effects (by phase change), e.g. in mood lamps and ashtrays; - in joke games; - in games for one or more participants or in articles intended to be used as such, including for decoration. <p>2. Articles not complying with paragraph 1 shall not be placed on the market.</p> <p>3. May not be placed on the market if they contain a colorant except for fiscal reasons and/or a perfume, provided that</p> <ul style="list-style-type: none"> - They may be used as fuel in decorative oil lamps intended for distribution to the general public; and - their aspiration is classified as hazardous and they are labeled R65 or H304. <p>4. Decorative oil lamps intended for supply to the general public shall not be placed on the market unless they comply with the European standard for decorative oil lamps (EN14059) adopted by the European Committee for Standardization (CEN).</p> <p>5. Without prejudice to the implementation of other Community provisions on the classification, packaging and labeling of dangerous substances and mixtures, suppliers shall ensure that the following requirements are met before placing them on the market:</p> <p>(a) Lamp oils labeled R65 or H304 and intended for distribution to the general public shall bear the following labels in a conspicuous, legible and indelible manner: 'Keep lamps filled with this liquid out of the reach of children' and, as of December 1, 2010, 'Even a small sip of lamp oil - or even just sucking on a lamp wick - can cause life-threatening lung damage'.</p> <p>(b) Liquid grill lighters labeled R65 or H304 and intended for distribution to the general public shall bear the following statement legibly and indelibly as of December 1, 2010: "Even a small sip of grill lighter may cause life-threatening lung injury."</p> <p>(c) Lamp oils and grill lighters labeled with R65 or H304 and intended for supply to the general public shall be packaged in black opaque containers of 1 liter or less as of December 1, 2010.</p> <p>(6) No later than June 1, 2014, the Commission shall request the European Chemicals Agency to prepare a dossier pursuant to Article 69 of this Regulation with a view to adopting, if appropriate, a ban on liquid grill lighters and decorative lamp fuels labeled with R65 or H304 and intended for supply to the general public.</p> <p>(7) Natural or legal persons placing lamp oils and liquid grill lighters labelled with R65 or H304 on the market for the first time shall submit data on alternatives to lamp oils and liquid grill lighters labelled with R65 or H304 to the competent authority of the Member State concerned by 1 December 2011 and annually thereafter. Member States shall make this data available to the Commission.</p>
--	---	--

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Berggau
Page 24 of 26

<p>Diocetylbis (pentane-2,4-dionato-O,O')tin</p>	<p>Organostannic compounds</p>	<p>1. Shall not be placed on the market as substances or in mixtures if they act as biocides in paints whose constituents are not chemically bound. (2) Shall not be placed on the market as substances or in mixtures when acting as biocides to prevent fouling by microorganisms, plants or animals on the following:</p> <p>(a) On all vessels, regardless of length, used on marine waterways, coastal and estuarine waterways, inland waterways, and lakes;</p> <p>(b) On boxes, floats, nets, and other devices or equipment used for fish and shellfish culture;</p> <p>(c) on totally or partially submerged gear or equipment of any kind. (3) Shall not be placed on the market as substances or in mixtures intended for the treatment of water in the industrial, commercial and municipal sectors. 4. Trisubstituted organostannic compounds:</p> <p>(a) Trisubstituted organostannic compounds, such as tributyltin compounds (TBT) and triphenyltin compounds (TPT), shall not be used in articles after July 1, 2010, if the concentration of tin in the article or any part thereof exceeds 0.1 percent by weight.</p> <p>(b) Articles not in compliance with paragraph (a) shall not be placed on the market after July 1, 2010, except for products that were in use in the Community before that date.</p> <p>5. dibutyltin compounds (DBT)</p> <p>(a) Dibutyltin compounds (DBT) shall not be used after January 1, 2012, in mixtures and articles intended to be supplied to the general public if the concentration of tin in the mixture or article, or in any part thereof, exceeds 0.1 percent by weight.</p> <p>(b) Products not in compliance with subsection (a) shall not be placed on the market after</p> <p>(b) Products that do not comply with subparagraph (a) shall not be placed on the market after January 1, 2012, except for products that were in use in the Community prior to that date.</p> <p>(c) By way of derogation, until January 1, 2015, subparagraphs (a) and (b) shall not apply to the following products and mixtures intended for supply to the general public:</p> <ul style="list-style-type: none"> - One-component and two-component room temperature vulcanizing sealants (RTV-1 and RTV-2 sealants) and adhesives; - Paints and coatings containing DBT compounds as catalysts when applied to these products; - soft polyvinyl chloride (PVC) profiles, co-extruded with rigid PVC or not; - Fabrics coated with PVC containing DBT compounds as stabilizers when intended for outdoor use. - outdoor stormwater piping, gutters and flashing, and roofing and siding materials. <p>(d) By way of derogation, points (a) and (b) shall not apply to materials and articles covered by Regulation (EC) No 1935/2004.</p> <p>6. dioctyltin compounds (DOT):</p> <p>(a) Dioctyltin (DOT) compounds shall not be used after January 1, 2012, in the following listed articles intended to be distributed to the general public or used in parts if the concentration of tin in the article or parts exceeds 0.1 percent by weight.</p> <ul style="list-style-type: none"> - Textile articles intended to come into contact with the skin; - Wall and floor coverings; - Baby articles; - Feminine hygiene articles; - Diapers; - Two-component room temperature vulcanization impression sets (RTV-2- impression sets). <p>(b) Articles not in compliance with paragraph (a) of this section shall not be placed on the market after January 1, 2012, except for products that were already in use in the Community before that date.</p>
--	--------------------------------	--

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
Revised: 25.04.2016
Version:

Ralmont GmbH
92361 Berggau
Page 25 of 26

Trimethoxyvinylsilane	<p>Substances classified as flammable Gases of category 1 or 2, as flammable liquids of category 1, 2 or 3, as flammable solids of category 1 or 2, as substances and mixtures which, in contact with water flammable gases of category 1, 2 or 3 spontaneously combustible (pyrophoric) liquids of category 1 or as self-igniting (pyrophoric) solids of category 1 and this irrespective of whether they are listed in Annex VI, Part 3 of this Regulation.</p>	<p>1. Shall not be used, either as a substance or as a mixture, in aerosol dispensers intended to be supplied to the general public for entertainment and decorative purposes, such as for</p> <ul style="list-style-type: none"> - Decorations with metallic luster effects, especially for festivities, - artificial snow and frost, - indecent noises, - streamers - joke excrements, - horn sounds for amusements, - foams and flakes for decoration purposes, - artificial cobwebs, - Stink bombs. <p>2. Without prejudice to the application of other Community provisions in the field of classification, packaging and labeling of substances, the supplier shall ensure, before placing on the market, that the packaging of the above aerosol dispensers is visibly, legibly and indelibly marked as follows: "For professional users only". (3) By way of derogation, paragraphs (1) and (2) shall not apply to the aerosol dispensers referred to in Article 8(1)(a) of Council Directive 75/324/EEC. (4) The aerosol dispensers referred to in paragraphs (1) and (2) may be placed on the market only if they comply with the requirements set out therein.</p>
-----------------------	---	--

National legislation Belgium:

RALMO®-Montage FIX crystal clear
No data available.

Diocetylbis (pentan-2,4-dionato-O,O')zinn

High Absorption: D; "D" means that resorption of the agent via the skin, mucous membranes or eyes is a significant part of the total exposure. This resorption can occur both by direct contact and by the presence of the agent in the air.

National legislation Germany:

RALMO®-Montage FIX crystal clear

WGK: 1; classification hazardous to water on component basis according to Verwaltungsvorschrift wassergefährdender
substances (VwVwS)

3-(Trimethoxysilyl)propylamin

TA-Air: 5.2.5

Pyrrithionzink

TA-Air: 5.2.1

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

TA-Air: 5.2.1

Diocetylbis (pentan-2,4-dionato-O,O')zinn

TA-Air: 5.2.5

Other relevant data:

RALMO®-Montage FIX crystal clear
No data available.

Diocetylbis (pentan-2,4-dionato-O,O')zinn

TLV carcinogen: Organotin compounds, as Sn; A4.
Absorption through skin: Skin; risk of cutaneous absorption.

15.2 Chemical safety assessment:

No chemical safety assessment required.

Safety Data Sheet

according to 1907/2006/EG, article 31

Date of Creation: 21.05.2015
 Revised: 25.04.2016
 Version:

Ralmont GmbH
 92361 Berggau
Page 26 of 26

Section 16: Other information

Complete wording of all H-statements listed under point 2 and 3:

H226 Flammable liquid under vapor.
 H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H317 May cause allergic skin reaction.
 H318 Causes serious eye damage.
 H332 Harmful by inhalation.
 H371 May cause damage to organs (immune system) if swallowed.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H373 May cause damage to organs 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.

(*) SELF CLASSIFICATION OF BIG

PBT substances = persistent, bioaccumulative and toxic substances.

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

M-factor

Pyrithione zinc	10	Acute	Customer information THOR(2014-10-27)
Bis (1,2,2,6,6-pentamethyl-4-piperidyl)-[[3,5-bis(1,1-dimethylethyl)-4-Hydroxyphenyl]methyl]butylmalonat	10	Chronic	ECHA

Specific concentration values CLP

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

All information contained in this safety data sheet is based on data and samples supplied by BIG. The information is given to the best of our knowledge and belief and reflects the state of knowledge at the time of preparation of the safety data sheet. The safety data sheet only provides instructions on how to safely handle, use, consume, store, transport and dispose of the substances/preparations/mixtures listed under item 1. New safety data sheets will be issued in due course, of which only the most recent version may be used. Older versions must be destroyed. Unless expressly stated otherwise in the safety data sheet, the information given in it does not apply to the substances/preparations/mixtures in a purer form, as a mixture with other substances or in other processing. The safety data sheet does not specify the quality of the substances/preparations/mixtures concerned. Compliance with the instructions contained in the safety data sheet does not release the consumer from his obligation to take all measures which common sense and the regulations and recommendations suggest in this respect or which are necessary and/or useful on the basis of the specific conditions of use. BIG does not guarantee the accuracy or completeness of the information contained herein and cannot be held liable for any changes made by third parties. This Safety Data Sheet is intended exclusively for use in the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside the area of application is at your own risk. Use of this Safety Data Sheet is subject to the license and limitation of liability provisions contained in your BIG license agreement or, if these are not applicable, to the general provisions of BIG. All intellectual property rights associated with this MSDS are owned by BIG; distribution and reproduction rights are restricted. For details, please refer to the aforementioned agreement or provisions.

(The data of the hazardous ingredients were taken from the latest safety data sheet of the supplier).