

Silirub A**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product name : Silirub A
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1 Relevant identified uses**

Sealant

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet**Supplier of the safety data sheet**

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +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
☎ +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**

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

2.2. Label elements

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

Supplemental information

EUH208 Contains: 4,5-dichloro-2-octyl-2H-isothiazol-3-one. May produce an allergic reaction.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
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Silirub A

dibutyltin di(acetate) 01-2119634587-29	1067-33-0 213-928-8	0.01%<C<0.1 %	Muta. 2; H341 Repr. 1B; H360FD STOT SE 1; H370 STOT RE 1; H372 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)(2)(10)(9)	Constituent
hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics 01-2119827000-58		10%<C<25%	Asp. Tox. 1; H304	(1)(10)	UVCB
4,5-dichloro-2-octyl-2H-isothiazol-3-one	64359-81-5 264-843-8	0.001%<C<0.1 1%	Acute Tox. 2; H330 Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1C; H314 STOT SE 3; H335 Skin Sens. 1A; H317 Aquatic Acute 1; H400	(1)	Constituent

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

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:

Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

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

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

4.2.1 Acute symptoms

After inhalation:

No effects known.

After skin contact:

Not irritating. ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

After eye contact:

Not irritating.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Polyvalent foam. Dry chemical powder. Carbon dioxide.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Upon combustion: formation of CO, CO₂ and small quantities of hydrogen chloride, sulphur oxides.

5.3. Advice for firefighters

5.3.1 Instructions:

No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

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

Reason for revision: ATP4

Publication date: 2007-01-23

Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

2 / 14

Silirub A

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 leaking substance. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

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

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a dry area. Store at room temperature. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, oxidizing agents.

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.

The Netherlands

Olienevel (minerale olie)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	5 mg/m ³
Tinverbindingen (organisch)(als Sn)	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	0.1 mg/m ³
	Short time value (Private occupational exposure limit value)	0.2 mg/m ³

Belgium

Etain (composés organiques de) (en Sn)	Time-weighted average exposure limit 8 h	0.1 mg/m ³
	Short time value	0.2 mg/m ³
Huiles minérales (brouillards)	Time-weighted average exposure limit 8 h	5 mg/m ³
	Short time value	10 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 time value (TLV - Adopted Value)	0.2 mg/m ³

Germany

Di-n-butylzinnverbindungen	Time-weighted average exposure limit 8 h (TRGS 900)	0.0018 ppm
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Reason for revision: ATP4

Publication date: 2007-01-23

Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

3 / 14

Silirub A

Di-n-butylzinnverbindungen	Time-weighted average exposure limit 8 h (TRGS 900)	0.009 mg/m ³
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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 time 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 (Workplace exposure limit (EH40/2005))	0.1 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	0.2 mg/m ³

b) National biological limit values

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

8.1.2 Sampling methods

If applicable and available it will be listed below.

Oil Mist (Mineral)	NIOSH	5026
Tin (Organic Cpd) (as Sn) (Organotin Compounds)	NIOSH	5504

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

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

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

dibutyltin di(acetate)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.01 mg/m ³	
	Acute systemic effects inhalation	0.07 mg/m ³	
	Long-term systemic effects dermal	0.2 mg/kg bw/day	
	Acute systemic effects dermal	1 mg/kg bw/day	

DNEL/DMEL - General population

dibutyltin di(acetate)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.003 mg/m ³	
	Acute systemic effects inhalation	0.02 mg/m ³	
	Long-term systemic effects dermal	0.08 mg/kg bw/day	
	Acute systemic effects dermal	0.5 mg/kg bw/day	
	Long-term systemic effects oral	0.002 mg/m ³	
	Acute systemic effects oral	0.01 mg/kg bw/day	

PNEC

dibutyltin di(acetate)

Compartments	Value	Remark
Fresh water	0.0014 mg/l	
Marine water	0.00014 mg/l	
Aqua (intermittent releases)	0.014 mg/l	
STP	1.63 mg/l	
Fresh water sediment	0.062 mg/kg sediment dw	
Marine water sediment	0.0062 mg/kg sediment dw	
Soil	0.05 mg/kg soil dw	
Oral	0.2 mg/kg food	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

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

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

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

a) Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit.

b) Hand protection:

Gloves.

c) Eye protection:

Safety glasses.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

Reason for revision: ATP4

Publication date: 2007-01-23

Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

4 / 14

Silirub A

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Paste
Odour	Vinegar odour
Odour threshold	No data available
Colour	Variable in colour, depending on the composition
Particle size	No data available
Explosion limits	No data available
Flammability	Not easily combustible
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	> 100 °C
Evaporation rate	No data available
Relative vapour density	Not applicable
Vapour pressure	No data available
Solubility	water ; insoluble
Relative density	1.03 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Absolute density	1030 kg/m ³ ; 20 °C
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SECTION 10: Stability and reactivity

10.1. Reactivity

Temperature above flashpoint: higher fire/explosion hazard. 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

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Upon combustion: formation of CO, CO₂ and small quantities of hydrogen chloride, sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

Silirub A

No (test) data on the mixture available

dibutyltin di(acetate)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		32 mg/kg		Rat	Inconclusive, insufficient data	
Dermal						Data waiving	
Inhalation						Data waiving	

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Publication date: 2007-01-23

Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

5 / 14

Silirub A

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

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

4,5-dichloro-2-octyl-2H-isothiazol-3-one

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral			category 4			Literature study	
Dermal			category 4			Literature study	
Inhalation			category 2			Literature study	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Silirub A

No (test) data on the mixture available

dibutyltin di(acetate)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye						Data waiving	
Skin	Corrosive	OECD 431	3, 60, 240 minutes		Reconstructed human epidermis	Experimental value	

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

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

4,5-dichloro-2-octyl-2H-isothiazol-3-one

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage; category					Literature study	
Skin	Corrosive; category 1C					Literature study	
Inhalation	Irritating; STOT SE cat.3					Literature study	

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

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

Silirub A

No (test) data on the mixture available

dibutyltin di(acetate)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406		24; 48 hours	Guinea pig (male/female)	Read-across	

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406		24; 48 hours	Guinea pig (female)	Read-across	

4,5-dichloro-2-octyl-2H-isothiazol-3-one

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing; category 1A					Literature study	

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for skin

Reason for revision: ATP4

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Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

6 / 14

Silirub A

Not classified as sensitizing for inhalation

Specific target organ toxicity

Silirub A

No (test) data on the mixture available

dibutyltin di(acetate)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL	OECD 421	0.3 mg/kg bw/day - 0.4 mg/kg bw/day	Thymus	No effect		Rat (male/female)	Read-across
Oral (diet)	NOAEL	OECD 408	40 ppm	Blood	No effect	90 day(s)	Rat (male/female)	Read-across
Oral (diet)	NOAEL	Subacute toxicity test	< 50 ppm	Thymus	No effect	2 weeks (daily)	Rat (male)	Read-across
Oral (diet)	LOAEL	Subacute toxicity test	50 ppm	Thymus	Change in the haemogramme/ blood composition	2 weeks (daily)	Rat (male)	Read-across
Dermal								Data waiving
Inhalation								Data waiving

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	Equivalent to OECD 408	> 5000 mg/kg bw/day		No effect	13 weeks (daily)	Rat (male/female)	Read-across
Dermal	NOAEL	Equivalent to OECD 411	> 495 mg/kg/d		No effect	13 weeks (daily, 5 days/week)	Rat (male/female)	Read-across
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	10186 mg/m ³ air		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Read-across

Judgement is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

Silirub A

No (test) data on the mixture available

dibutyltin di(acetate)

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (<i>S.typhimurium</i>)	No effect	Experimental value
Positive	Equivalent to OECD 473	Rat lymphocytes		Read-across
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Chinese hamster lung fibroblasts	No effect	Read-across

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (<i>S.typhimurium</i>)		Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)		Read-across
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)		Read-across

Mutagenicity (in vivo)

Silirub A

No (test) data on the mixture available

dibutyltin di(acetate)

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

Reason for revision: ATP4

Publication date: 2007-01-23

Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

7 / 14

Silirub A

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 483	8 weeks (6h/day, 5 days/week)	Mouse (male)	Male reproductive organ	Read-across
Negative	Equivalent to OECD 475		Rat (male/female)	Bone marrow	Read-across
Negative	Equivalent to OECD 474	24, 48, 72 h	Mouse (male/female)	Bone marrow	Read-across

Carcinogenicity

Silirub A

No (test) data on the mixture available

Reproductive toxicity

Silirub A

No (test) data on the mixture available

dibutyltin di(acetate)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	5 mg/kg bw/day	10 day(s)	Rat	No effect	Foetus	Experimental value
Maternal toxicity	NOAEL	OECD 414	1 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Experimental value
Effects on fertility	NOAEL (P)	OECD 421	1.9 mg/kg bw/day - 2.3 mg/kg bw/day		Rat (male)	No effect		Read-across
	NOAEL (P)	OECD 421	1.7 mg/kg bw/day - 2.4 mg/kg bw/day		Rat (female)	No effect		Read-across

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	> 1000 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Experimental value
Maternal toxicity	NOAEL	OECD 414	> 1000 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Experimental value
Effects on fertility	NOAEL (P)	Equivalent to OECD 422	> 1000 mg/kg bw/day		Rat (male/female)	No effect		Read-across
	NOAEL (P)	Equivalent to OECD 421	> 1000 mg/kg bw/day		Rat (male/female)	No effect		Read-across

Judgement is based on the relevant ingredients

Conclusion CMR

Not classified for carcinogenicity

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

Silirub A

No (test) data on the mixture available

Chronic effects from short and long-term exposure

Silirub A

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

SECTION 12: Ecological information

12.1. Toxicity

Silirub A

No (test) data on the mixture available

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Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

8 / 14

Silirub A

dibutyltin di(acetate)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	0.0107 mmol/l	48 h	Oryzias latipes	Semi-static system	Fresh water	Experimental value; Lethal
	LOEC	OECD 203	3.1 mg/l	72 h	Brachydanio	Static system	Fresh water	Read-across
Acute toxicity invertebrates	EC50	OECD 202	1.4 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50		35 µg/l	72 h	Skeletonema costatum	Static system	Salt water	Experimental value; Growth
Toxicity aquatic micro-organisms	EC50	OECD 209	> 1000 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; GLP

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	> 1028 mg/l	96 h	Scophthalmus maximus	Semi-static system	Salt water	Experimental value; GLP
Acute toxicity invertebrates	LC50	ISO 14669	> 3193 mg/l	48 h	Acartia tonsa	Static system	Salt water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	ISO 10253	> 10000 mg/l	72 h	Skeletonema costatum	Static system	Salt water	Experimental value; GLP
Long-term toxicity fish	NOEL		> 1000 mg/l	28 day(s)	Oncorhynchus mykiss		Fresh water	QSAR; Growth rate
Long-term toxicity aquatic invertebrates	NOEL	US EPA	> 100 mg/l	8 day(s)	Ceriodaphnia dubia	Semi-static system	Fresh water	QSAR; Nominal concentration
Toxicity aquatic micro-organisms	EC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; GLP

4,5-dichloro-2-octyl-2H-isothiazol-3-one

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	0.0027 mg/l	96 h	Pisces			Experimental value
Acute toxicity invertebrates	EC50		0.0052 mg/l	48 h	Daphnia magna			Literature study
Toxicity algae and other aquatic plants	ErC50	OECD 201	0.077 mg/l	96 h	Pseudokirchneriella subcapitata			Experimental value

Judgement of the mixture is based on the relevant ingredients

Conclusion

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

12.2. Persistence and degradability

dibutyltin di(acetate)

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	23 %; GLP	39 day(s)	Read-across

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Biodegradation water

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

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

Silirub A

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

dibutyltin di(acetate)

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		0.13 - 10	14 day(s)	Cyprinus carpio	Read-across

Log Kow

Method	Remark	Value	Temperature	Value determination
		0.81		Estimated value

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Reason for revision: ATP4

Publication date: 2007-01-23

Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

9 / 14

Silirub A

4,5-dichloro-2-octyl-2H-isothiazol-3-one

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.59		Literature study

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

12.4. Mobility in soil

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	0.3 %		92.8 %	6.8 %	0.1 %	Calculated value

Conclusion

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

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

Silirub A

Global warming potential (GWP)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

Ozone-depleting potential (ODP)

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

dibutyltin di(acetate)

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

4,5-dichloro-2-octyl-2H-isothiazol-3-one

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

Ground water

Ground water 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

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

08 04 10 (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants other than those mentioned in 08 04 09). Depending on branch of industry and production process, also other waste codes may be applicable. Can be considered as non-hazardous waste according to Regulation (EU) No 1357/2014.

13.1.2 Disposal methods

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

13.1.3 Packaging/Container

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

15 01 02 (plastic packaging).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

Transport	Not subject
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14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
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Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

10 / 14

Silirub A

Class	
Classification code	
14.4. Packing group	
Packing group	
Labels	
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	
Limited quantities	

Rail (RID)

14.1. UN number	
Transport	Not subject
14.2. UN proper shipping name	
14.3. Transport hazard class(es)	
Hazard identification number	
Class	
Classification code	
14.4. Packing group	
Packing group	
Labels	
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	
Limited quantities	

Inland waterways (ADN)

14.1. UN number	
Transport	Not subject
14.2. UN proper shipping name	
14.3. Transport hazard class(es)	
Class	
Classification code	
14.4. Packing group	
Packing group	
Labels	
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	
Limited quantities	

Sea (IMDG/IMSBC)

14.1. UN number	
Transport	Not subject
14.2. UN proper shipping name	
14.3. Transport hazard class(es)	
Class	
14.4. Packing group	
Packing group	
Labels	
14.5. Environmental hazards	
Marine pollutant	-
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	
Limited quantities	
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
Annex II of MARPOL 73/78	

Air (ICAO-TI/IATA-DGR)

14.1. UN number	
Transport	Not subject
14.2. UN proper shipping name	
14.3. Transport hazard class(es)	
Class	
14.4. Packing group	

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Silirub A

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

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
< 2 %	
< 20 g/l	

European drinking water standards (Directive 98/83/EC)

4,5-dichloro-2-octyl-2H-isothiazol-3-one

Parameter	Parametric value	Note	Reference
Pesticides	0,1 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.
Pesticides — Total	0,5 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
dibutyltin di(acetate) - hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects.2. Articles not complying with paragraph 1 shall not be placed on the market.3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304.4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
dibutyltin di(acetate)	Organostannic compounds	1. Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixture is acting as biocide in free association paint.2. Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixture acts as biocide to prevent the fouling by micro-organisms, plants or animals of: (a) all craft irrespective of their length intended for use in marine, coastal, estuarine and inland waterways and lakes; (b) cages, floats, nets and any other appliances or equipment used for fish or shellfish farming; (c) any totally or partly submerged appliance or equipment.3. Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixture is intended for use in the treatment of industrial waters.4. Tri-substituted organostannic compounds: a) Tri-substituted organostannic compounds such as tributyltin (TBT) compounds and

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Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

12 / 14

Silirub A

		<p>triphenyltin (TPT) compounds shall not be used after 1 July 2010 in articles where the concentration in the article, or part thereof, is greater than the equivalent of 0,1 % by weight of tin.</p> <p>b) Articles not complying with point (a) shall not be placed on the market after 1 July 2010, except for articles that were already in use in the Community before that date.</p> <p>5. Dibutyltin (DBT) compounds:</p> <p>a) Dibutyltin (DBT) compounds shall not be used after 1 January 2012 in mixtures and articles for supply to the general public where the concentration in the mixture or the article, or part thereof, is greater than the equivalent of 0,1 % by weight of tin.</p> <p>b) Articles and mixtures not complying with point (a) shall not be placed on the market after 1 January 2012, except for articles that were already in use in the Community before that date.</p> <p>c) By way of derogation, points (a) and (b) shall not apply until 1 January 2015 to the following articles and mixtures for supply to the general public:</p> <ul style="list-style-type: none"> — one-component and two-component room temperature vulcanisation sealants (RTV-1 and RTV-2 sealants) and adhesives, — paints and coatings containing DBT compounds as catalysts when applied on articles, — soft polyvinyl chloride (PVC) profiles whether by themselves or coextruded with hard PVC, — fabrics coated with PVC containing DBT compounds as stabilisers when intended for outdoor applications, — outdoor rainwater pipes, gutters and fittings, as well as covering material for roofing and façades, <p>d) By way of derogation, points (a) and (b) shall not apply to materials and articles regulated under Regulation (EC) No 1935/2004.</p> <p>6. Dioctyltin (DOT) compound:</p> <p>(a) Dioctyltin (DOT) compounds shall not be used after 1 January 2012 in the following articles for supply to, or use by, the general public, where the concentration in the article, or part thereof, is greater than the equivalent of 0,1 % by weight of tin:</p> <ul style="list-style-type: none"> — textile articles intended to come into contact with the skin, — gloves, — footwear or part of footwear intended to come into contact with the skin, — wall and floor coverings, — childcare articles, — female hygiene products, — nappies, — two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits). <p>(b) Articles not complying with point (a) shall not be placed on the market after 1 January 2012, except for articles that were already in use in the Community before that date.</p>
dibutyltin di(acetate)	<p>Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as toxic to reproduction category 1A or 1B (Table 3.1) or toxic to reproduction category 1 or 2 (Table 3.2) and listed as follows: -</p> <p>Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5 -</p> <p>Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6</p>	<p>Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30:1. Shall not be placed on the market, or used,</p> <ul style="list-style-type: none"> — as substances, — as constituents of other substances, or, — in mixtures, <p>for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than:</p> <ul style="list-style-type: none"> — either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, — the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008. <p>Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: "Restricted to professional users".</p> <p>2. By way of derogation, paragraph 1 shall not apply to:</p> <p>(a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC;</p> <p>(b) cosmetic products as defined by Directive 76/768/EEC;</p> <p>(c) the following fuels and oil products:</p> <ul style="list-style-type: none"> — motor fuels which are covered by Directive 98/70/EC, — mineral oil products intended for use as fuel in mobile or fixed combustion plants, — fuels sold in closed systems (e.g. liquid gas bottles); <p>(d) artists' paints covered by Directive 1999/45/EC;</p> <p>(e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.</p>

National legislation The Netherlands

Silirub A

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 05
Waterbezwaarlijkheid	11

National legislation Germany

Silirub A

WGK	1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
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dibutyltin di(acetate)

Schwangerschaft Gruppe	D
MAK 8-Stunden-Mittelwert mg/m ³	Zinnverbindungen, organische (als Sn berechnet): 0,1 mg/m ³ ; als Sn berechnet gemessen als einatembare Fraktion (vgl. Abschn. Vd) S. 191)
TA-Luft	5.2.7.1.3

Reason for revision: ATP4

Publication date: 2007-01-23

Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

13 / 14

Silirub A

hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

TA-Luft	5.2.5
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4,5-dichloro-2-octyl-2H-isothiazol-3-one

TA-Luft	5.2.5; 1
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National legislation France

Silirub A

No data available

National legislation Belgium

Silirub A

No data available

Other relevant data

Silirub A

No data available

dibutyltin di(acetate)

TLV - Carcinogen	Tin organic compounds, as Sn; A4
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hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics

TLV - Carcinogen	Mineral oil, poorly and mildly refined; A2
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15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16: Other information

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

- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H360FD May damage fertility. May damage the unborn child.
- H370 Causes damage to the thymus if swallowed.
- H372 Causes damage to the thymus through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

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

M-factor

dibutyltin di(acetate)	10	Acute	BIG
4,5-dichloro-2-octyl-2H-isothiazol-3-one	100	Acute	BIG

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 is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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Date of revision: 2015-07-14

Revision number: 0300

Product number: 44799

14 / 14