

Silirub 2S**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier:**

Product name : Silirub 2S
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**

Sealing compound

1.2.2 Uses advised against

No uses advised against known

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

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +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:****2.1.1 Classification according to Regulation EC No 1272/2008**

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

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Not classified as dangerous according to the criteria of Directive(s) 67/548/EEC and/or 1999/45/EC

2.2 Label elements:**Labelling according to Regulation EC No 1272/2008 (CLP)**

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

Supplemental information

EUH208 Contains: 2-butanone oxime. May produce an allergic reaction.

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Not classified as dangerous in compliance with Directive 67/548/EEC and/or Directive 1999/45/EC

Contains: 2-butanone oxime. May produce an allergic reaction.

2.3 Other hazards:**CLP**

No other hazards known

DSD/DPD

May produce an allergic reaction

SECTION 3: Composition/information on ingredients

Silirub 2S

3.1 Substances:

Not applicable

3.2 Mixtures:

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to DSD/DPD	Classification according to CLP	Note	Remark
pyrithione zinc	13463-41-7 236-671-3	0.025%<C <0.25%	T; R23 Xn; R22 Xi; R38 - 41 N; R50	Acute Tox. 3; H331 Acute Tox. 3; H301 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Acute 1; H400	(1)(9)	Constituent

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

(9) M-factor, see heading 16

SECTION 4: First aid measures

4.1 Description of first aid measures:

General:

If you feel unwell, seek medical advice.

After inhalation:

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

After skin contact:

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

After eye contact:

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

After ingestion:

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

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

4.2.1 Acute symptoms

After inhalation:

Unlikely to cause harmful effects.

After skin contact:

Unlikely to cause harmful effects.

After eye contact:

Unlikely to cause harmful effects.

After ingestion:

Unlikely to cause harmful effects.

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. ABC powder. Carbon dioxide.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2 Special hazards arising from the substance or mixture:

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

5.3 Advice for firefighters:

5.3.1 Instructions:

Dilute toxic gases with water spray.

5.3.2 Special protective equipment for fire-fighters:

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

Publication date: 2014-11-19

Silirub 2S

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:

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. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources.

7.2.3 Suitable packaging material:

Synthetic material.

7.2.4 Non suitable packaging material:

No data available

7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure

a) Occupational exposure limit values

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

b) National biological limit values

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

8.1.2 Sampling methods

If applicable and available it will be listed below.

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

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

8.1.4 DNEL/PNEC values

DNEL - Workers

pyrithione zinc

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	0.01 mg/kg bw/day	

PNEC

pyrithione zinc

Compartments	Value	Remark
Fresh water	90 ng/l	
Salt water	90 ng/l	
STP	0.01 mg/l	
Fresh water sediment	0.0095 mg/kg sediment dw	
Marine water sediment	0.0095 mg/kg sediment dw	
Soil	8.85 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2 Exposure controls:

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

8.2.1 Appropriate engineering controls

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

8.2.2 Individual protection measures, such as personal protective equipment

Publication date: 2014-11-19

Silirub 2S

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

a) Respiratory protection:

Respiratory protection not required in normal conditions.

b) Hand protection:

Gloves.

c) Eye protection:

Safety glasses.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical form	Paste
Odour	Characteristic odour
Odour threshold	No data available
Colour	Variable in colour, depending on the composition
Particle size	No data available
Explosion limits	No data available
Flammability	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	> 200 °C
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	water ; insoluble
Relative density	> 1.0
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:

Surface tension	No data available
Absolute density	> 1000 kg/m ³

SECTION 10: Stability and reactivity

10.1 Reactivity:

Temperature above flashpoint: higher fire/explosion hazard.

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:

No data available.

10.6 Hazardous decomposition products:

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

11.1.1 Test results

Acute toxicity

Silirub 2S

Publication date: 2014-11-19

Silirub 2S

No (test)data on the mixture available

pyrithione zinc

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

Classification is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Silirub 2S

No (test)data on the mixture available

pyrithione zinc

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	OECD 405	24 h	24 hours	Rabbit	Experimental value	
Skin	Irritating					Literature study	

Classification is based on the relevant ingredients

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Respiratory or skin sensitisation

Silirub 2S

No (test)data on the mixture available

pyrithione zinc

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

Classification is based on the relevant ingredients

Conclusion

Not classified as sensitizing for skin

Specific target organ toxicity

Silirub 2S

No (test)data on the mixture available

pyrithione zinc

Route of exposure	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 - 104 weeks (daily)	Rat (male/female)	Experimental value
Dermal	NOAEL	EPA OPP 82-3	100 mg/kg bw/day		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (dust)	LOAEL	EPA OPPTS 870.3465	6 mg/m ³ air		Respiratory difficulties	3 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (dust)	NOAEL	EPA OPPTS 870.3465	2 mg/m ³ air		No effect	3 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

Classification is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

Silirub 2S

No (test)data on the mixture available

Publication date: 2014-11-19

Silirub 2S

pyrithione 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	Chinese hamster lung fibroblasts	No effect	Experimental value
Positive with metabolic activation, positive without metabolic activation	OECD 473	Chinese hamster lung fibroblasts	Chromosome aberrations	Experimental value

Mutagenicity (in vivo)

Silirub 2S

No (test) data on the mixture available

pyrithione zinc

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

Carcinogenicity

Silirub 2S

No (test) data on the mixture available

pyrithione zinc

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Oral		OECD 453		104 weeks (daily)	Rat (male/female)	Experimental value		No carcinogenic effect

Reproductive toxicity

Silirub 2S

No (test) data on the mixture available

pyrithione zinc

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

Classification is based on the relevant ingredients

Conclusion CMR

Not classified for reprotoxic or developmental toxicity

Not classified for mutagenic or genotoxic toxicity

Not classified for carcinogenicity

Toxicity other effects

Silirub 2S

No (test) data on the mixture available

Chronic effects from short and long-term exposure

Silirub 2S

Skin rash/inflammation.

SECTION 12: Ecological information

12.1 Toxicity:

Silirub 2S

No (test) data on the mixture available

Publication date: 2014-11-19

Silirub 2S

pyrithione zinc

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA OPP 72-1	2.6 µg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; GLP
Acute toxicity invertebrates	EC50	EPA OPP 72-3	6.3 µg/l	96 h	Americamysis bahia	Flow-through system	Salt water	Experimental value; GLP
Toxicity algae and other aquatic plants	ErC50	EPA OPP 122-2	4.1 µg/l	120 h		Static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EC50	OECD 209	2.4 mg/l	3 h	Activated sludge	Static system		Experimental value; GLP

Classification of the mixture is based on the relevant ingredients of the mixture

Conclusion

No data available on ecotoxicity

12.2 Persistence and degradability:

pyrithione zinc

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B: CO2 Evolution Test	39 %; GLP	28 day(s)	Experimental value
OECD 303A: Activated Sludge Units	>= 98.8 %; Activated sludge	35 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN	8.69 h; GLP		Calculated value

Phototransformation water (DT50 water)

Method	Value	Conc. OH-radicals	Value determination
Other	< 7 minutes		Experimental value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
EPA 161-1	7.4 - 12.9 day(s); GLP		Experimental value

Conclusion

No test data of component(s) available

12.3 Bioaccumulative potential:

Silirub 2S

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

pyrithione zinc

BCF other aquatic organisms

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

Log Kow

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

Conclusion

No test data of component(s) available

12.4 Mobility in soil:

pyrithione zinc

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
< 0.5E-4 Pa.m ³ /mol				Experimental value

Conclusion

No (test) data on mobility of the components available

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 2S

Global warming potential (GWP)

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

Publication date: 2014-11-19

Silirub 2S

Ozone-depleting potential (ODP)

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

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 Directive 2008/98/EC.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

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
-----------	-------------

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	

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:

Publication date: 2014-11-19

Silirub 2S

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 73/78 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:		
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
1 %	

National legislation The Netherlands

Silirub 2S

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 05
Waterbezwaarlijkheid	8

National legislation Germany

Silirub 2S

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

National legislation France

Silirub 2S

No data available

National legislation Belgium

Silirub 2S

No data available

Other relevant data

Silirub 2S

No data available

15.2 Chemical safety assessment:

No chemical safety assessment is required.

Publication date: 2014-11-19

Silirub 2S

SECTION 16: Other information

Full text of any R-phrases referred to under headings 2 and 3:

- R22 Harmful if swallowed
- R23 Toxic by inhalation
- R38 Irritating to skin
- R41 Risk of serious damage to eyes
- R50 Very toxic to aquatic organisms

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

- H301 Toxic if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H331 Toxic if inhaled.
- H400 Very toxic to aquatic life.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

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

M-factor

pyrithione zinc	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.

Publication date: 2014-11-19