

SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

SILIRUB S

1. Identification of the substance/preparation and of the company/undertaking

- 1.1 Identification of the substance or preparation:**
- Not applicable
- 1.2 Use of the substance or the preparation:**
- Sealant
- 1.3 Company/undertaking identification:**
SOUDAL N.V.
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Technische Schoolstraat 43 A, B-2440 Geel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
triacetoxylethylsilane	17689-77-9 241-677-4	< 5	C	14 - 34 (1)

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

3. Hazards identification

- No hazard classification according to Directive 67/548/EEC and 1999/45/EC

4. First aid measures

- 4.1 Eye contact:**
- Rinse immediately with plenty of water
- Seek medical advice
- 4.2 Skin contact:**
- Rinse immediately with plenty of water
- If irritation persists: seek medical advice
- 4.3 After inhalation:**
- Remove the victim into fresh air
- Seek medical advice
- 4.4 After ingestion:**
- Never give water to an unconscious person
- Do not induce vomiting
- Seek medical advice

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Reason for revision : Directive 2001/58/EC

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5. Fire-fighting measures

- 5.1 Suitable extinguishing media:**
- Polyvalent foam
 - Dry chemical powder
 - Carbon dioxide
- 5.2 Unsuitable extinguishing media:**
- None
- 5.3 Special exposure hazards:**
- Not easily combustible
 - On burning: release of carbon monoxide and carbon dioxide
- 5.4 Instructions:**
- No specific firefighting instructions required
- 5.5 Special protective equipment for firefighters:**
- Heat/fire exposure: compressed air/oxygen apparatus

6. Accidental release measures

- 6.1 Personal protection/precautions:**
see heading 8.1/8.3/10.3
- 6.2 Environmental precautions:**
- Use appropriate containment to avoid environmental contamination
- 6.3 Methods of cleaning up:**
- Remove the product by mechanical means
 - Take collected spill to competent authority
 - Wash clothing and equipment after handling

7. Handling and storage

- 7.1 Handling:**
- Observe normal hygiene standards
- 7.2 Storage:**
- Keep container tightly closed
- | | | |
|--------------------------------|---|-----------------|
| Storage temperature | : | Roomtemperature |
| Quantity limit | : | N.D. kg |
| Storage life | : | 365 days |
| Materials for packaging | : | |
| - suitable | : | plastics |
- 7.3 Specific uses:**
- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	: -	mg/m ³	-	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: -	mg/m ³	-	ppm
OES-STEL	: -	mg/m ³	-	ppm
MAK	: -	mg/m ³	-	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: -	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: -	mg/m ³	-	ppm
GWK-15 min.	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: -	mg/m ³	-	ppm
EC-STEL	: -	mg/m ³	-	ppm

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Use only in well ventilated area

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- Respiratory protection not required in normal conditions

8.3.2 hand protection:

- Gloves

8.3.3 eye protection:

- Safety glasses

8.3.4 skin protection:

- Protective clothing

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9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Paste
Odour	: Vinegar
Colour	: Variable in colour

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: N.D.	°C
Flashpoint	: N.D.	°C
Explosion limits	: N.D.	Vol%
Vapour pressure (at 20°C)	: N.D.	hPa
Vapour pressure (at 50°C)	: N.D.	hPa
Relative density (at 20°C)	: 1.0 - 1.3	
Water solubility	: Insoluble	
Soluble in	: Organic solvents	
Relative vapour density	: N.D.	
Viscosity (at 20°C)	: N.D.	Pa.s
Partition coefficient n-octanol/water	: N.D.	
Evaporation rate		
ratio to butyl acetate	: N.D.	
ratio to ether	: N.D.	

9.3 Other information:

Melting point/melting range	: N.D.	°C
Auto-ignition point	: N.D.	°C
Saturation concentration	: N.D.	g/m ³

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:

- Stable under normal conditions

10.2 Materials to avoid:

- None

10.3 Hazardous decomposition products:

- On burning: release of carbon monoxide and carbon dioxide

11. Toxicological information

11.1 Acute toxicity:

TRIACETOXYETHYLSILANE:

LD50 oral rat	: 2415	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LC50 inhalation rat	: N.D.	mg/l/4 h
LC50 inhalation rat	: N.D.	ppm/4 h

11.2 Chronic toxicity:

EC carc. cat. : not listed
EC muta. cat. : not listed
EC repr. cat. : not listed

Carcinogenicity (TLV) : not listed
Carcinogenicity (MAC) : not listed
Carcinogenicity (VME) : not listed
Carcinogenicity (GWBB) : not listed

Carcinogenicity (MAK) : not listed
Mutagenicity (MAK) : not listed
Teratogenicity (MAK) : not listed

IARC classification : not listed

11.3 Routes of exposure: ingestion, inhalation, eye and skin

11.4 Acute effects/symptoms:

- Practically non-toxic

11.5 Chronic effects:

- None known

12. Ecological information

12.1 Ecotoxicity:

TRIACETOXYETHYLSILANE:

- LC50 (96 h) : 250 mg/l (BRACHYDANIO RERIO)
- EC50 (48 h) : 62 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 73 mg/l (SCENEDESMUS SUBSPICATUS)

12.2 Mobility:

- Volatile organic compounds (VOC): 4%
- Insoluble in water
- Substance sinks in water

For other physicochemical properties see section 9

12.3 Persistence and degradability:

- Biodegradation BOD₅ : N.D. % ThOD
- water : No data available
- soil : T ½ N.D. days

12.4 Bioaccumulative potential:

- log P_{ow} : N.D.
- BCF : N.D.

12.5 Other adverse effects:

- WGK : 1 (classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- Effect on the ozone layer : Not dangerous for the ozone layer (1999/45/EC)
- Greenhouse effect : No data available
- Effect on waste water purification : No data available

13. Disposal considerations van waste materials

13.1 Provisions relating to waste:

- Waste material code (75/442/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 04 10 (waste adhesives and sealants other than those mentioned in 08 04 09)

13.2 Disposal methods:

- Recycle/reuse

13.3 Packaging:

- Waste material code packaging (75/442/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 02 (plastic packaging)

14. Transport information

- 14.1 Classification of the substance in compliance with UN Recommendations
UN number : -
CLASS : NOT SUBJECT
SUB RISKS :
PACKING :
PROPER SHIPPING NAME :
- 14.2 ADR (transport by road)
CLASS : NOT SUBJECT
PACKING :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
- 14.3 RID (transport by rail)
class : NOT SUBJECT
PACKING :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
- 14.4 ADNR (transport by inland waterways)
CLASS : NOT SUBJECT
PACKING :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
- 14.5 IMDG (maritime transport)
CLASS : NOT SUBJECT
SUB RISKS :
PACKING :
MFAG :
EMS :
Marine pollutant :
- 14.6 ICAO (air transport)
CLASS : NOT SUBJECT
SUB RISKS :
PACKING :
PACKING INSTRUCTIONS PASSENGER AIRCRAFT :
PACKING INSTRUCTIONS CARGO AIRCRAFT :
- 14.7 Special precautions in connection with transport : Not restricted for any mode of international transport

15. Regulatory information

Labelling in accordance with EC directives 67/548/EEC and 1999/45/EC
(** : see heading 16)

LABELLING NOT REQUIRED ACCORDING TO AVAILABLE INFORMATION

Safety data sheet available for professional user on request

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = Internal classification

(**) Labelling:

The labelling of the substance described in this MSDS complies with the provisions of Directive 1999/45/EC of 31 May 1999, published in the Official Journal of the European Communities L 200 of 30/07/1999. This Directive replaces Directive 88/379/EEC of 7 June 1988, published in the Official Journal of the European Communities L 187 of 16/07/1988.

Member States shall apply the laws, regulations and administrative provisions referred to in article 22 of this Directive:

- (a) to preparations not within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2002; and
- (b) to preparations within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2004.

Full text of any R-phrases referred to under heading 2:

R14 : Reacts violently with water
R34 : Causes burns

Exposure limits:

TLV : Threshold Limit Value - ACGIH US 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - the Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

I : Inhalable fraction = **T** : Total dust = **E** : Einatembarer Aerosolanteil
R : Respirable fraction = **A** : Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

a: aerosol		r: rook/Rauch	(fume)
d: damp	(vapour)	st: stof/Staub	(dust)
du: dust		ve: vezel	(fibre)
fa: Faser	(fibre)	va: vapour	
fi: fibre		om: oil mist	
fu: fume		on: olienevel/Ölnebel	(oil mist)
p: poussière	(dust)	part: particles	

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands 2002