

PRODUCT SAFETY DATA SHEET

According to article 31 and Annex II of the EU REACH Regulation

Version: 2.0

Revision Date: 31.08.2009

SILASTIC(R) 81-F NW CURING AGENT

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Trade name	:	SILASTIC(R) 81-F NW CURING AGENT		
Company	:	Dow Corning Europe S.A. rue Jules Bordet - Parc Industriel - Zone C B-7180 Seneffe Belgium		
Service	:	Dow Corning Central Europe	Tel: +49 6112371	Fax: +49 611237609
		Dow Corning Northern Europe	Tel: +44 1676528000	Fax: +44 1676528001
		Dow Corning Southern Europe	Tel: +33 472841360	Fax: +33 472841379
Emergency Phone Number	:	Dow Corning (Barry U.K. 24h)	Tel: +44 1446732350	
		Dow Corning (Wiesbaden 24h)	Tel: +49 61122158	
		Dow Corning (Seneffe 24h)	Tel: +32 64 888240	
E-mail address (Safety Data Sheet)	:	sdseu@dowcorning.com		
Use of the substance/preparation	:	Vulcanising agents Polymers		

2. HAZARDS IDENTIFICATION

The principal hazards of the product as supplied are:

Harmful by inhalation.
Irritating to eyes and skin.

Vapours may form explosive mixtures with air.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Organotin compound

Hazardous Ingredients:

Name	CAS-No.	EINECS/ ELINCS No.	Conc. (% w/w)	Classification	
Tetrapropyl orthosilicate	682-01-9	211-659-0	25.0	Xi	R36/38
Trimethoxyphenylsilane	2996-92-1	221-066-9	11.0	Xn	R22
Dimethylbis[(1-oxoneodecyl)oxy]stannane	68928-76-7	273-028-6	6.5	Xn	R22 R52/53 R48/22
Methanol	67-56-1	200-659-6	0.36	F T	R11 R39/23/24/25

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					R23/24/25
Cyclohexyltrimethoxysilane	-	Exempt or not available	0.24	N Xn Xi	R51/53 R22 R38
Tetramethyl orthosilicate	681-84-5	211-656-4	<=0.14	T F T+	R25 R11 R26

4. FIRST AID MEASURES

- On contact with eyes** : Immediately flush with water. If eye irritation persists, consult a specialist.
- On skin contact** : Immediately flush with water. If skin irritation persists, get medical attention.
- If inhaled** : Remove to fresh air. Obtain medical attention.
- On ingestion** : Obtain medical attention.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media** : On large fires use dry chemical, foam or water spray (fog). On small fires use carbon dioxide (CO2), dry chemical or water spray. Water can be used to cool fire exposed containers.
- Unsuitable extinguishing media** : None known.
- Hazards during fire fighting** : Vapours may form explosive mixtures with air.
- Special protective equipment/procedures** : A self-contained respirator and protective clothing should be worn. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
- Hazardous Combustion Products** : Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Wear proper protective equipment.
- Environmental precautions** : Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers.

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Methods for cleaning up : Determine the need to evacuate or isolate the area according to your local emergency plan. Very large spills should be contained by bunding, etc... procedures. Mop, wipe or soak up with absorbent material and place in a container with a lid. The spilled product produces an extremely slippery surface.

7. HANDLING AND STORAGE

Advice on safe handling : Avoid skin and eye contact. General ventilation is required. Local ventilation is required. Do not breathe vapour. Do not ingest.

Advice on storage : Do not store with oxidizing agents.
Vapours may form explosive mixtures with air.

Specific uses : Refer to technical data sheet available on request.

Unsuitable packaging materials : None known.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls : Ventilation : Refer to Section 7

Exposure controls for hazardous components

Name	CAS-No.	Exposure Limits
Trimethoxyphenylsilane	2996-92-1	250 ppm STEL as methanol 200 ppm TWA as methanol 333 mg/m ³ STEL as methanol 266 mg/m ³ TWA as methanol
Dimethylbis[(1-oxoneodecyl)oxy]stannane	68928-76-7	0.1 mg/m ³ TWA as Sn 0.2 mg/m ³ STEL as Sn
Methanol	67-56-1	200 ppm TWA 250 ppm STEL 266 mg/m ³ TWA 333 mg/m ³ STEL
Cyclohexyltrimethoxysilane	-	200 ppm TWA, 250 ppm STEL as methanol
Tetramethyl orthosilicate	681-84-5	5 ppm STEL 1 ppm TWA 32 mg/m ³ STEL 6.3 mg/m ³ TWA

Personal protection equipment

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Respiratory protection	: Suitable respiratory protection should be worn if the product is used in large quantities, confined spaces or in other circumstances where the OEL may be approached or exceeded. A suitable respirator must be worn if the product is used in any circumstances where an aerosol or mist may be generated, such as during spraying or similar activities. Depending on the working conditions, wear a respiratory mask with filter(s) AXP or use a self-contained respirator. The choice of a filter type depends on the amount and type of chemical being handled in the workplace. Regarding filter characteristics, contact your respiratory protection supplier.
Hand protection	: Chemical protective gloves should be worn: Silver shield(TM). 4H(TM). Regarding glove's breakthrough time, contact your chemical protective glove supplier.
Eye protection	: Face shield or safety goggles.
Skin protection	: Wear impervious overalls in circumstances where significant skin contact can occur.
Hygiene measures	: Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.
Environmental exposure controls	: Refer to section 6 and 12.
Additional information	: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these types of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Dow Corning customer service group.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: Liquid **Colour:** Clear to slightly hazy, colourless **Odour:** Very little

Important health, safety and environmental information

Boiling point/range	: > 35 °C
Flash point	: 64 °C (Pensky-Martens Closed Cup)
Explosive properties	: No Vapours may form explosive mixtures with air.
Specific Gravity	: 0.969
Viscosity	: 40 mPa s at 25°C.

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SILASTIC(R) 81-F NW CURING AGENT**Oxidizing properties** : No

The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

10. STABILITY AND REACTIVITY**Stability** : Stable under normal usage conditions.**Conditions to avoid** : None established.**Materials to avoid** : Can react with strong oxidising agents. This product releases methanol.**Hazardous decomposition products** : Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde.**11. TOXICOLOGICAL INFORMATION****On contact with eyes** : Irritating.**On skin contact** : Irritating.**If inhaled** : Harmful by inhalation of vapour. May cause dizziness, drowsiness, confusion, headaches, nausea, and at high concentrations, unconsciousness.**On ingestion** : Small amounts transferred to the mouth by fingers during use should not injure. Swallowing large amounts may cause digestive discomfort. Forms methanol and may cause serious injury to man at doses > 200 mg/kg.¹ Based on product test data.² Based on test data from similar products.**12. ECOLOGICAL INFORMATION****Environmental fate and distribution**

This product hydrolyses in water or wet soil, releasing alcohols and silicic acid. This product hydrolyses in water or moist air, releasing methanol and organosilicons.

Ecotoxicity effects

This product contains substances which may cause adverse effects in the aquatic environment.

Bioaccumulation : Organotin compounds can bioaccumulate.**Fate and effects in waste water treatment plants**

No adverse effects on bacteria are predicted.

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SILASTIC(R) 81-F NW CURING AGENT**13. DISPOSAL CONSIDERATIONS**

- Product disposal** : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
- Packaging disposal** : Dispose of in accordance with local regulations. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

14. TRANSPORT INFORMATION**Road / Rail (ADR/RID)**

Not subject to ADR/RID.

Sea transport (IMDG)

Not subject to IMDG code.

Air transport (IATA)

Not subject to IATA regulations.

15. REGULATORY INFORMATION**Labelling according to EEC Directive**

- Contains** : Tetramethyl orthosilicate
- Symbols** : Xn Harmful.
- R-phrases** : R20 Harmful by inhalation.
R36/38 Irritating to eyes and skin.
- S-phrases** : S2 Keep out of the reach of children.
S23(V) Do not breathe vapour.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 Wear suitable gloves.
S46 If swallowed, seek medical advice immediately and show this container or label.
S51 Use only in well-ventilated areas.

National legislation / regulations

- Ozone depleting chemicals** : No ozone depleting chemicals are present or used in manufacture.

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SILASTIC(R) 81-F NW CURING AGENT**Status**

AICS	: All ingredients listed, exempt or notified.
IECSC	: All ingredients listed or exempt.
KECL	: All ingredients listed, exempt or notified.
PICCS	: All ingredients listed, exempt or notified.
DSL	: All ingredients listed or exempt.
EINECS	: All ingredients listed, exempt or notified (ELINCS).
TSCA	: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
ENCS/ISHL	: All ingredients listed, exempt or notified.

16. OTHER INFORMATION

This product safety data sheet was prepared in compliance with article 31 and Annex II of the EU REACH Regulation as well as its relevant amendments, on the approximation of laws, regulations and administrative provisions relative to the classification, packaging and labelling of dangerous substances and preparations.

It is the responsibility of persons in receipt of this Product Safety Data Sheet to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces a formulation containing the Dow Corning product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from the Dow Corning Product Safety Data Sheet to their own Product Safety Data Sheet in compliance with article 31 and Annex II of the EU REACH Regulation.

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS. Dow Corning shall not be held responsible for any defect in the product covered by this SDS, should the existence of such defect not be detectable considering the current state of scientific and technical knowledge.

As stated above, this Safety Data Sheet has been prepared in compliance with applicable European law. If you purchase this material outside Europe, where compliance laws may differ, you should receive from your local Dow Corning supplier a SDS applicable to the country in which the product is sold and intended to be used. Please note that the appearance and content of the SDS may vary - even for the same product - between different countries, reflecting the different compliance requirements. Should you have any question, please refer to your local Dow Corning supplier.

R11 Highly flammable., **R22** Harmful if swallowed., **R23/24/25** Toxic by inhalation, in contact with skin and if swallowed., **R25** Toxic if swallowed., **R26** Very toxic by inhalation., **R36/38** Irritating to eyes and skin., **R38** Irritating to skin., **R39/23/24/25** Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed., **R48/22** Harmful: danger of serious damage to health by prolonged exposure if swallowed., **R51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment., **R52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.