DOW CORNING

SAFETY DATA SHEET

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

Version: 3.0
Revision Date: 25.11.2010
Superseded date: 31.10.2008

DOW CORNING(R) 1-2577 LOW VOC CONFORMAL COATING

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

1.1 Product name : DOW CORNING(R) 1-2577 LOW VOC CONFORMAL COATING

1.2 Identified uses : Semiconductors

Uses advised against : None known.

1.3 Company : Dow Corning Europe S.A.
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1.4 Emergency Phone Number :

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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to EU Directives 67/548/EEC or 1999/45/EC:

R11 Highly flammable.
R43 May cause sensitization by skin contact.

2.2 Label elements

Labelling according to EEC Directive

Contains : Trimethoxy(methyl)silane

Symbols : F Highly flammable.
Xi Irritant.

R-phrases : R11 Highly flammable.
R43 May cause sensitization by skin contact.

S-phrases : S23(S) Do not breathe spray.
S23(V) Do not breathe vapour.
S24 Avoid contact with skin.

S33 Take precautionary measures against static discharges.
S37 Wear suitable gloves.
S51 Use only in well-ventilated areas.

2.3 Other hazards

Vapours may form explosive mixtures with air.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Silicone resin solution.

According to EU Directives 67/548/EEC or 1999/45/EC:

Name	CAS-No.	EINECS/ ELINCS No.	REACH Registration Number	Conc. (% w/w)	Classification	
Octamethyltrisiloxane	107-51-7	203-497-4	-	64.0		R10
Dimethyl, methylmethoxy, phenylmethoxy siloxane with methyl and phenyl silsesquioxanes	68952-93-2	Exempt or not available	-	30.0	Substance with a Community workplace exposure limit	
Toluene	108-88-3	203-625-9	-	3.0	F Xi Xn Xn, Repr. Cat. 3	R11 R38 R48/20 R65 R63 R67
Trimethoxy(methyl)silane	1185-55-3	214-685-0	-	1.7	 F	R43 R11

According to Regulation (EC) No. 1272/2008:

Name	CAS-No.	EINECS/ ELINCS No.	REACH Registration Number	Conc. (% w/w)	Classification
Octamethyltrisiloxane	107-51-7	203-497-4	-	64.0	Flammable liquid: Category 3 - H226
Dimethyl, methylmethoxy, phenylmethoxy siloxane with methyl and phenyl silsesquioxanes	68952-93-2	Exempt or not available	-	30.0	Substance with a Community workplace exposure limit
Toluene	108-88-3	203-625-9	-	3.0	Flammable liquid: Category 2 - H225 Skin corrosion/irritation: Category 2 - H315 Reproductive toxicity: Category 2 - H361d Specific target organ toxicity - single exposure (Inhalation - vapour): Category 3 (narcotic effects) - H336 Specific target organ toxicity - repeated exposure (Inhalation): Category 2 (central nervous system) - H373 Aspiration hazard: Category 1 - H304
Trimethoxy(methyl)silane	1185-55-3	214-685-0	-	1.7	Flammable liquid: Category 2 - H225 Skin sensitization: Category 1 - H317

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.
CLP classifications are based on all current available data including from known international organizations. These classifications are subject to revision as more information becomes available.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures:

On contact with eyes	:	Flush with water.
On skin contact	:	Flush with water. Wipe off. Obtain medical attention.
If inhaled	:	Remove to fresh air.
On ingestion	:	Obtain medical attention.
4.2 Most important symptoms/effects, acute and delayed	:	May cause sensitization by skin contact.

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media	:	On large fires use AFFF alcohol compatible foam or water spray (fog). On small fires use AFFF alcohol compatible foam, CO2 or water spray (fog). Water can be used to cool fire exposed containers.
Unsuitable extinguishing media	:	None known.
5.2 Hazards during fire fighting	:	Fire burns more vigorously than would be expected. Vapours are heavier than air and can travel along ground to remote ignition sources. Electrostatic charges may be generated during transfer of product from its container. Ensure that all equipment is electrically earthed. Vapours may form explosive mixtures with air.
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. Sulphur products. Metal products.
5.3 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.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency 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. Eliminate all possible sources of ignition.

6.2 Environmental precautions : Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers.

6.3 Methods and materials for containment and cleaning up : Determine the need to evacuate or isolate the area according to your local emergency plan. Eliminate all possible sources of ignition. 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

7.1 Advice on safe handling : General ventilation is required. Local ventilation is recommended. Avoid skin and eye contact. Do not breathe spray or mist. Do not breathe vapour. Do not ingest. Do not empty into drains.

7.2 Advice on storage : Store in a flameproof, well ventilated area. Electrostatic charges may be generated during transfer of product from its container. Ensure that all equipment is electrically earthed. Keep container tightly closed.
Vapours may form explosive mixtures with air.
Storage temperature: maximum 32 °C

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Name	CAS-No.	Exposure Limits
Octamethyltrisiloxane	107-51-7	200 ppm (8h TWA) Dow Corning recommendation.
Dimethyl, methylmethoxy, phenylmethoxy siloxane with methyl and phenyl silsesquioxanes	68952-93-2	200 ppm TWA as methanol 250 ppm STEL as methanol 266 mg/m3 TWA as methanol 333 mg/m3 STEL as methanol
Toluene	108-88-3	50 ppm TWA 100 ppm STEL 191 mg/m3 TWA 384 mg/m3 STEL
Trimethoxy(methyl)silane	1185-55-3	50 ppm (8h TWA) - Dow Corning recommendation.

8.2 Exposure controls

Engineering Controls	:	Ventilation : Refer to Section 7.1
Personal protection equipment		
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 or gauntlets should be worn and removed correctly to avoid skin contamination: Silver shield(TM). 4H(TM). Regarding glove's breakthrough time,contact your chemical protective glove supplier.
Eye/face protection	:	Safety glasses should be worn.
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. Remove contaminated clothing immediately.
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.
Environmental exposure controls	:	Refer to section 6 and 12.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid
Colour	:	Translucent
Odour	:	Very little
Boiling point/range	:	101 °C
Flash point	:	16.1 °C (Closed Cup)

Explosive properties	:	No Vapours may form explosive mixtures with air.
Specific Gravity	:	0.88
Viscosity	:	1000 cSt at 25°C.
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

10.1 Reactivity	:	This product releases methanol.
10.2 Stability	:	Stable under normal usage conditions.
10.3 Possibility of hazardous reactions	:	None known.
10.4 Conditions to avoid	:	Eliminate all possible sources of ignition.
10.5 Materials to avoid	:	Can react with strong oxidising agents.
10.6 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. Sulphur products. Metal products.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

On contact with eyes	:	May cause temporary discomfort.
On skin contact	:	Large amount in contact with significant skin surface areas may cause systemic adverse effects.
If inhaled	:	May cause dizziness, drowsiness, confusion, headaches, nausea, and at high concentrations, unconsciousness.
On ingestion	:	Forms methanol. Swallowing large amounts may cause systemic adverse effects and blindness.

Chronic toxicity:

On skin contact	:	Prolonged or repeated dermal contact may cause systemic adverse effect. Repeated contact can cause sensitisation and allergic dermatitis.
If inhaled	:	Prolonged or repeated inhalation may cause systemic adverse effects.
On ingestion	:	Repeated swallowing may cause systemic adverse effects.

Toxicokinetics, metabolism and distribution : Dangerous amounts can be absorbed through the skin.

[1] Based on product test data.
[2] Based on test data from similar products.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity effects

No adverse effects on aquatic organisms are predicted.

12.2 Persistence and degradability

This product hydrolyses in water or moist air, releasing methanol and organosilicons.

12.3 Bioaccumulation

No bioaccumulation is predicted.

12.4 Release to waters / Mobility in soil

Fate and effects in waste water treatment plants:

No adverse effects on bacteria are predicted.

12.5 Results of PBT and vPvB assessment

Not applicable.

13. DISPOSAL CONSIDERATIONS

Product and packaging 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.

14. TRANSPORT INFORMATION

Road / Rail (ADR/RID)

UN No. : UN 1993

Proper Shipping Name : FLAMMABLE LIQUID, N.O.S.(Octamethyltrisiloxane / Toluene)

Class : 3

Packing group : II

Labels	:	3

Sea transport (IMDG)

UN No.	:	UN 1993
Proper Shipping Name	:	FLAMMABLE LIQUID, N.O.S.(Octamethyltrisiloxane / Toluene)
Class	:	3
Packing group	:	II
Emergency Schedule (EmS)	:	F-E S-E
Labels	:	flammable liquid

Air transport (IATA)

UN No.	:	UN 1993
Proper Shipping Name	:	Flammable liquid, n.o.s.(Octamethyltrisiloxane / Toluene)
Class	:	3
Packing group	:	II
Labels	:	Flammable Liquid

15. REGULATORY INFORMATION

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

Status

EINECS	:	All ingredients listed or exempt.
TSCA	:	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

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 amendements, 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.

Source of information: Internal data and publically available information

R10 Flammable., **R11** Highly flammable., **R38** Irritating to skin., **R43** May cause sensitization by skin contact., **R48/20** Harmful: danger of serious damage to health by prolonged exposure through inhalation., **R63** Possible risk of harm to the unborn child., **R65** Harmful: May cause lung damage if swallowed., **R67** Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapour., **H226** Flammable liquid and vapour., **H304** May be fatal if swallowed and enters airways., **H315** Causes skin irritation., **H317** May cause an allergic skin reaction., **H336** May cause drowsiness or dizziness., **H361d** Suspected of damaging the unborn child.