DOW CORNING

PRODUCT SAFETY DATA SHEET

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

Version: 1.5
Revision Date: 24.02.2009

SYLGARD(R) 182 SILICONE ELASTOMER BASE (BASE information is below)

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Trade name : SYLGARD(R) 182 SILICONE ELASTOMER BASE (BASE information is below)

Company : Dow Corning 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 : Corrosion inhibitors
Electrical and electronic applications

2. HAZARDS IDENTIFICATION

Not hazardous according to article 31 and Annex II of the EU REACH Regulation and its subsequent amendments.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Silicone

Hazardous Ingredients:

Name	CAS-No.	EINECS/ ELINCS No.	Conc. (% w/w)	Classification
Dimethylvinylated and Trimethylated Silica	68988-89-6	Exempt or not available	31.0	
Tetra(trimethylsiloxy)silane	3555-47-3	222-613-4	1.0	R53

4. FIRST AID MEASURES

On contact with eyes : No first aid should be needed.

On skin contact : No first aid should be needed.

If inhaled : No first aid should be needed.

On ingestion	:	No first aid should be needed.

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	:	None known.
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.
Precautions to protect the environment	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers.
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	:	General ventilation is recommended. Avoid eye contact. Do not breathe spray or mist.
Advice on storage	:	Do not store with oxidizing agents.
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
Dimethylvinylated and Trimethylated Silica	68988-89-6	4 mg/m3 TWA Respirable dust 10 mg/m3 TWA Inhalable dust

Personal protection equipment

Respiratory protection : 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) P 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 : Gloves are not normally required.

Eye protection : Safety glasses should be worn.

Skin protection : Protective equipment is not normally necessary.

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:** Colorless **Odour:** Very little

Important health, safety and environmental information

Boiling point/range : > 100 °C

Flash point : > 100 °C (Closed Cup)

Explosive properties	:	No
Specific Gravity	:	1.03
Viscosity	:	5000 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

Stability	:	Stable under normal usage conditions.
Conditions to avoid	:	None established.
Materials to avoid	:	Can react with strong oxidising agents.
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	:	May cause temporary discomfort.
On skin contact	:	No adverse effects are normally expected.
If inhaled	:	No adverse effects are normally expected.
On ingestion	:	No adverse effects are normally expected.
Other Health Hazard Information	:	This product contains (a) powder(s) hazardous by inhalation. This is not relevant to the current physical form of the product, which is not in a respirable form. Product may emit formaldehyde vapour at temperatures above 180ºC in the presence of air. Formaldehyde vapour is a suspected carcinogen, toxic byinhalation and irritating to eyes and the respiratory system. Exposure limits should be strictly respected.

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

12. ECOLOGICAL INFORMATION

Environmental fate and distribution

Siloxanes are removed from water by sedimentation or binding to sewage sludge. In soil, siloxanes are degraded.

Ecotoxicity effects

No adverse effects on aquatic organisms.

Bioaccumulation : No bioaccumulation potential.

Fate and effects in waste water treatment plants

Removed > 90% by binding onto sewage sludge. No adverse effects on bacteria. The siloxanes in this product do not contribute to the BOD.

Additional environmental information

Additional environmental information on the silicone component is available on request.

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

No special packaging or labelling requirements.

National legislation / regulations

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

Status

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.
AICS	:	All ingredients listed, exempt or notified.
IECSC	:	All ingredients listed or exempt.
ENCS/ISHL	:	All ingredients listed, exempt or notified.
KECL	:	All ingredients listed, exempt or notified.
PICCS	:	All ingredients listed, exempt or notified.
DSL	:	All ingredients listed or exempt.

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.

R53 May cause long-term adverse effects in the aquatic environment.,

DOW CORNING

PRODUCT SAFETY DATA SHEET

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

Version: 1.5
Revision Date: 05.12.2007

SYLGARD(R) 182 SILICONE ELASTOMER CURING AGENT (CURING AGENT information is below)

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Trade name : SYLGARD(R) 182 SILICONE ELASTOMER CURING AGENT (CURING AGENT information is below)

Company : Dow Corning 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

2. HAZARDS IDENTIFICATION

The principal hazards of the product as supplied are:

Some hydrogen gas may be released. Hydrogen is flammable and can form explosive mixtures with air.

Not hazardous according to article 31 and Annex II of the EU REACH Regulation and its subsequent amendments.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Silicone resin solution.

Hazardous Ingredients:

Name	CAS-No.	EINECS/ ELINCS No.	Conc. (% w/w)	Classification
Dimethylvinylated and Trimethylated Silica	68988-89-6	Exempt or not available	12.0	
Tetramethyltetravinylcyclotetrasiloxane	2554-06-5	Exempt or not available	1.9	R53

4. FIRST AID MEASURES

On contact with eyes	:	No first aid should be needed.
On skin contact	:	No first aid should be needed.
If inhaled	:	No first aid should be needed.
On ingestion	:	No first aid should be needed.

5. FIRE FIGHTING MEASURES

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. Most fire extinguishing media will cause hydrogen release. Thus, in poorly ventilated or confined spaces, the accumulation of hydrogen may result in flash fire or explosion if ignited. Applying foam may release flammable hydrogen gas that can be trapped under the foam.
Unsuitable extinguishing media	:	Dry powder. Do not allow extinguishing medium to contact container contents.
Hazards during fire fighting	:	None known.
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. Hydrogen.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Wear proper protective equipment.
Precautions to protect the environment	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers.
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 vented container. The spilled product produces an extremely slippery surface.

7. HANDLING AND STORAGE

Advice on safe handling : Avoid eye contact. Do not breathe spray or mist. General ventilation is required.

Advice on storage : This product slowly evolves hydrogen on storage. Keep only in a vented container in a well ventilated area. Keep container closed and store away from water or moisture.

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

Unsuitable packaging materials : Do not store in or use glass containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls : Ventilation : Refer to Section 7

Exposure controls for hazardous components

Name	CAS-No.	Exposure Limits
Dimethylvinylated and Trimethylated Silica	68988-89-6	4 mg/m3 TWA Respirable dust. 10 mg/m3 TWA Inhalable dust.

Personal protection equipment

Respiratory protection : 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) P 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 : Gloves are not normally required.

Eye protection : Safety glasses should be worn.

Skin protection : Protective equipment is not normally necessary.

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:** Colorless **Odour:** None

Important health, safety and environmental information

Boiling point/range	:	> 100 °C
Flash point	:	> 101.1 °C (Closed Cup)
Explosive properties	:	No Some hydrogen gas may be released. Hydrogen is flammable and can form explosive mixtures with air.
Specific Gravity	:	1.03
Viscosity	:	110 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

Stability	:	Stable under normal usage conditions.
Conditions to avoid	:	None established.
Materials to avoid	:	Hydrogen is liberated on contact with water, alcohols, acidic or basic materials, many metals or metallic compounds and can form explosive mixtures in air. Can react with strong oxidising agents.
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. Hydrogen.

11. TOXICOLOGICAL INFORMATION

On contact with eyes	:	May cause temporary discomfort.

On skin contact	:	No adverse effects are normally expected.
If inhaled	:	No adverse effects are normally expected.
On ingestion	:	No adverse effects are normally expected.
Other Health Hazard Information	:	This product contains (a) powder(s) hazardous by inhalation. This is not relevant to the current physical form of the product, which is not in a respirable form. Product may emit formaldehyde vapour at temperatures above 180ºC in the presence of air. Formaldehyde vapour is a suspected carcinogen, toxic byinhalation and irritating to eyes and the respiratory system. Exposure limits should be strictly respected.

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

12. ECOLOGICAL INFORMATION

Environmental fate and distribution

Siloxanes are removed from water by sedimentation or binding to sewage sludge. In soil, siloxanes are degraded.

Ecotoxicity effects

No adverse effects on aquatic organisms.

Bioaccumulation : No bioaccumulation potential.

Fate and effects in waste water treatment plants

Removed > 90% by binding onto sewage sludge. No adverse effects on bacteria. The siloxanes in this product do not contribute to the BOD.

Additional environmental information

Additional environmental information on the silicone component is available on request.

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.

Remarks : VENTED PACKAGES ARE FORBIDDEN FOR AIR TRANSPORT.

15. REGULATORY INFORMATION

Labelling according to EEC Directive

S-phrases : S9 Keep container in a well-ventilated place.
S12 Do not keep the container sealed.
S16 Keep away from sources of ignition - no smoking.

National legislation / regulations

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

Status

AICS : All ingredients listed, exempt or notified.

DSL : All ingredients listed or exempt.

IECSC : All ingredients listed or exempt.

EINECS : All ingredients listed, exempt or notified (ELINCS).

MITI : All ingredients listed, exempt or notified.

KECL : All ingredients listed, exempt or notified.

PICCS : All ingredients listed, exempt or notified.

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

16. OTHER INFORMATION

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R53 May cause long-term adverse effects in the aquatic environment.,