

## PRODUCT SAFETY DATA SHEET

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

Version: 2.3

Revision Date: 19.11.2008

**SYLGARD(R) 170 SILICONE ELASTOMER (PART A) (PART A information is below)**

**1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

<b>Trade name</b>	:	SYLGARD(R) 170 SILICONE ELASTOMER (PART A) (PART A information is below)		
<b>Company</b>	:	Dow Corning S.A. rue Jules Bordet - Parc Industriel - Zone C B-7180 Seneffe Belgium		
<b>Service</b>	:	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	
<b>Emergency Phone Number</b>	:	Dow Corning (Barry U.K. 24h)	Tel: +44 1446732350	
		Dow Corning (Wiesbaden 24h)	Tel: +49 61122158	
		Dow Corning (Seneffe 24h)	Tel: +32 64 888240	
<b>E-mail address (Safety Data Sheet)</b>	:	sdseu@dowcorning.com		
<b>Use of the substance/preparation</b>	:	Electrical and electronic applications		

**2. HAZARDS IDENTIFICATION**

**The principal hazards of the product as supplied are:**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

**Chemical characterization:** Silicone

**Hazardous Ingredients:**

Name	CAS-No.	EINECS/ ELINCS No.	Conc. (% w/w)	Classification
Quartz	14808-60-7	238-878-4	46.0	Xn R48/20 R68/20
Zinc oxide	1314-13-2	215-222-5	0.9	N R50/53

**4. FIRST AID MEASURES**

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

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- 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 (CO<sub>2</sub>), 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. Quartz.

**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions** : Wear proper protective equipment.
- Precautions to protect the environment** : Do not empty into drains. 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** : Avoid eye contact. Do not breathe spray or mist. General ventilation is recommended. Local ventilation is recommended.
- Advice on storage** : Do not store with oxidizing agents.
- Specific uses** : Refer to technical data sheet available on request.

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**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
Quartz	14808-60-7	0.1 mg/m <sup>3</sup> TWA Respirable 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. 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.  
Depending on the working conditions, wear a respiratory mask with filter(s) BP 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](http://www.SEHSC.com)) or contact the Dow Corning customer service group.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

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**SYLGARD(R) 170 SILICONE ELASTOMER (PART A) (PART A information is below)****Form:** Liquid      **Colour:** Black      **Odour:** Slight**Important health, safety and environmental information**

**Boiling point/range** : > 200 °C

**Flash point** : > 101.1 °C (Closed Cup)

**Explosive properties** : No

**Specific Gravity** : 1.35

**Viscosity** : 3000 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. Quartz.

**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** : Human health hazards associated with quartz (silica, crystalline respirable dust) and other fibrogenic dusts arise following inhalational exposure to respirable particles. Quartz in the present formulation (uncured or cured) is not available in a respirable form. Product may emit formaldehyde vapour at temperatures above 180°C in the presence of air. Formaldehyde vapour is a suspected carcinogen, toxic by inhalation and irritating to eyes and the respiratory system. Exposure limits should be strictly respected.

<sup>1</sup> Based on product test data.<sup>2</sup> Based on test data from similar products.

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**SYLGARD(R) 170 SILICONE ELASTOMER (PART A) (PART A information is below)****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**

Harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

**Bioaccumulation** : No bioaccumulation potential.

**Fate and effects in waste water treatment plants**

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

**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.

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**SYLGARD(R) 170 SILICONE ELASTOMER (PART A) (PART A information is below)****15. REGULATORY INFORMATION****Labelling according to EEC Directive**

**R-phrases** : R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S-phrases** : S23(F) Do not breathe fumes.  
S51 Use only in well-ventilated areas.  
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

**National legislation / regulations**

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

**Status**

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

**EINECS** : 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.

**R48/20** Harmful: danger of serious damage to health by prolonged exposure through inhalation., **R50/53** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment., **R68/20** Harmful: possible risk of irreversible effects through inhalation.

**PRODUCT SAFETY DATA SHEET**

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

Version: 2.1

Revision Date: 03.04.2008

**SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)****1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

<b>Trade name</b>	:	SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)		
<b>Company</b>	:	Dow Corning S.A. rue Jules Bordet - Parc Industriel - Zone C B-7180 Seneffe Belgium		
<b>Service</b>	:	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	
<b>Emergency Phone Number</b>	:	Dow Corning (Barry U.K. 24h)	Tel: +44 1446732350	
		Dow Corning (Wiesbaden 24h)	Tel: +49 61122158	
		Dow Corning (Seneffe 24h)	Tel: +32 64 888240	
<b>E-mail address (Safety Data Sheet)</b>	:	sdseu@dowcorning.com		
<b>Use of the substance/preparation</b>	:	Electrical and electronic applications		

**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**Hazardous Ingredients:**

Name	CAS-No.	EINECS/ ELINCS No.	Conc. (% w/w)	Classification
Quartz	14808-60-7	238-878-4	46.0	Xn R48/20 R68/20

**4. FIRST AID MEASURES**

**PRODUCT SAFETY DATA SHEET**

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

Version: 2.1

Revision Date: 03.04.2008

**SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)**

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

**5. FIRE FIGHTING MEASURES**

<b>Suitable extinguishing media</b>	:	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.
<b>Unsuitable extinguishing media</b>	:	Dry powder. Do not allow extinguishing medium to contact container contents.
<b>Hazards during fire fighting</b>	:	None known.
<b>Special protective equipment/procedures</b>	:	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.
<b>Hazardous Combustion Products</b>	:	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. Quartz.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	:	Wear proper protective equipment.
<b>Precautions to protect the environment</b>	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers.
<b>Methods for cleaning up</b>	:	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**

<b>Advice on safe handling</b>	:	Avoid eye contact. Do not breathe spray or mist. General ventilation is required.
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**SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)**

<b>Advice on storage</b>	:	Keep container closed and store away from water or moisture. This product may evolve hydrogen on storage.
<b>Specific uses</b>	:	Refer to technical data sheet available on request.
<b>Unsuitable packaging materials</b>	:	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
Quartz	14808-60-7	0.1 mg/m3 TWA Respirable 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](http://www.SEHSC.com)) or contact the Dow Corning customer service group.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PRODUCT SAFETY DATA SHEET**

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

Version: 2.1

Revision Date: 03.04.2008

**SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)****Appearance****Form:** Liquid                      **Colour:** Off-White                      **Odour:** Slight**Important health, safety and environmental information**

**Boiling point/range** : > 200 °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** : 1.33

**Viscosity** : 2000 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. Quartz.

**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.

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**SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)**

**Other Health Hazard Information** : Human health hazards associated with quartz (silica, crystalline respirable dust) and other fibrogenic dusts arise following inhalational exposure to respirable particles. Quartz in the present formulation (uncured or cured) is not available in a respirable form. Product may emit formaldehyde vapour at temperatures above 180°C in the presence of air. Formaldehyde vapour is a suspected carcinogen, toxic by inhalation and irritating to eyes and the respiratory system. Exposure limits should be strictly respected.

<sup>1</sup> Based on product test data.

<sup>2</sup> 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)**

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**SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)**

Not subject to IMDG code.

**Air transport (IATA)**

Not subject to IATA regulations.

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

**S-phrases** : S9 Keep container in a well-ventilated place.  
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**

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

**EINECS** : All ingredients listed or exempt.

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**SYLGARD(R) 170 SILICONE ELASTOMER (PART B) (PART B information is below)****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.

**R48/20** Harmful: danger of serious damage to health by prolonged exposure through inhalation., **R68/20** Harmful: possible risk of irreversible effects through inhalation.