



DOW CORNING CORPORATION

Material Safety Data Sheet

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Version: 2.2

Revision Date: 2023/07/11

DOW CORNING(R) 995 SILICONE STRUCTURAL SEALANT, BLACK

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

MSDS No.: 02168715

SUPPLIER:
Dow Corning Canada Inc.
15-6400 Millcreek Drive, Suite 416
Mississauga, ON, Canada L5N 3E7

Prepared by Product Safety: (800) 248-2481
NEWALTA: (800) 567-7455
Revision Date: 2023/07/11

MANUFACTURER:
Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

24 Hour Emergency Telephone: (989) 496-5900

WHMIS CLASSIFICATION: Class D, Division 2, Subdivision A.
Class D, Division 2, Subdivision B.

Material Usage: Sealant and adhesive

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Generic Description: Silicone elastomer
Physical Form: Paste
Colour: Black
Odour: Alcoholic

Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

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POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause temporary redness and discomfort.
Skin: May cause mild irritation.
Inhalation: Irritates respiratory passages very slightly. Vapor overexposure may cause drowsiness.
Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

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Skin: No known applicable information.

Inhalation: Prolonged or repeated exposure by inhalation may injure internally.

Oral: Repeated ingestion or swallowing large amounts may injure internally.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
PMN871176	40.0 - 70.0	Dimethyl siloxane, trimethoxysilyl-terminated
1185-55-3	1.0 - 5.0	Methyltrimethoxysilane
1333-86-4	1.0 - 5.0	Carbon black
57-11-4	1.0 - 5.0	Stearic acid
556-67-2	0.1 - 1.0	Octamethylcyclotetrasiloxane
14808-60-7	0.1 - 1.0	Quartz

The ingredients listed above are controlled products as defined in CPR, am. SOR/88-555.

4. FIRST AID MEASURES

Eye: Immediately flush with water.

Skin:

Inhalation: Remove to fresh air. Get medical attention if ill effects persist.

Oral: Get medical attention.

Notes to Physician: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

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Flash Point:	Not applicable.
Autoignition Temperature:	Not available.
Flammability Limits in Air:	Not available.
Extinguishing Media:	On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO ₂), dry chemical or water spray. Water can be used to cool fire exposed containers.
Fire Fighting Measures:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire Hazards:	None.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up: Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, provincial, federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases.

Note: See section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally.

Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Component Exposure Limits**

Consult local authorities for acceptable provincial values.

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
PMN871176	Dimethyl siloxane,	

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1185-55-3	trimethoxysilyl-terminated Methyltrimethoxysilane	Dow Corning guide: TWA 50 ppm. Also see methyl alcohol comments. LD50: 12,500 mg/kg - Oral Rat
1333-86-4	Carbon black	OSHA PEL and ACGIH TLV: TWA 3.5 mg/m ³ .
57-11-4	Stearic acid	None established. LD50: 23 mg/kg - Intravenous Mouse
556-67-2	Octamethylcyclotetrasiloxane	Dow Corning guide: TWA 10 ppm. LC50: 36 mg/L - Inhalation Rat ; 4 Hrs ; 4hr Vapor/Aerosol LD50: > 2,000 mg/kg - Oral Rat
14808-60-7	Quartz	OSHA PEL (final rule): TWA 10 mg/m ³ % respirable SiO ₂ +2; TWA 30 mg/m ³ % total dust SiO ₂ +2 and ACGIH TLV: TWA 0.025 mg/m ³ respirable fraction.

Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

Engineering Controls

Local Ventilation: Recommended.
General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Washing at mealtime and end of shift is adequate.

Suitable Gloves: Handle in accordance with good industrial hygiene and safety practices.

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits as determined by air sampling or are unknown, appropriate respiratory protection should be worn. Follow CSA Standard Z94.4-93 and use NIOSH/MHSA approved respirators.

Personal Protective Equipment for Spills

Eyes: Use full face respirator.

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Skin:	Washing at mealtime and end of shift is adequate.
Inhalation/Suitable Respirator:	Respiratory protection recommended. Follow CSA Standard Z94.4-93 and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Precautionary Measures:	Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally. Use reasonable care.
Comments:	Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus.
Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Paste
Color:	Black
Odor:	Alcoholic
Odor Threshold:	Not available.
Specific Gravity @ 25°C:	Not available.
Viscosity:	Not available.
Freezing/Melting Point:	Not available.
Boiling Point:	Not available.
Vapor Pressure @ 25°C:	Not available.
Vapor Density:	Not available.
Evaporation Rate:	Not available.
Solubility in Water:	Not available.
Coefficient of Water/Oil	Not available.
Distribution:	
pH:	Not available.
Volatile Content:	Not available.
Flash Point:	Not applicable.
Autoignition Temperature:	Not available.
Flammability Limits in Air:	Not available.

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

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable.
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Hazardous Polymerization:	Hazardous polymerization will not occur.
Conditions to Avoid:	None.
Materials to Avoid:	Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Quartz. Carbon oxides and traces of incompletely burned carbon compounds. Nitrogen oxides. Silicon dioxide. Formaldehyde. Metal oxides. Sulfur oxides.

11. TOXICOLOGICAL INFORMATIONComponent Toxicology Information

Prolonged overexposure to quartz or crystalline silica dust causes fibrotic lung disease (silicosis) and potentially lung cancer.

Recent results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. These effects, which have been shown to be rat-specific, occur at the highest exposure dose (700 ppm) only, a level that greatly exceeds typical workplace or consumer exposures. Industrial, commercial, or consumer uses of products containing D4 do not represent a risk to humans.

Octamethylcyclotetrasiloxane administered to rats by inhalation at concentrations of 500 and 700 ppm resulted in statistically significant decreases in the number of pups born and the live litter size in both the first and second generations. Prolonged estrous cycles, and decreased mating and fertility indices were observed following 700 ppm exposure in the second generation only. There were also increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia). Subsequent mode of action work demonstrated the effect on reproduction in female rats is due to delayed ovulation caused by a treatment-related delay in or blockage of the luteinizing hormone (LH) surge on the day of proestrus. This mode of action is not considered relevant to humans.

This material contains methyltrimethoxysilane (MTMS). MTMS was evaluated in a combined repeated-dose toxicity study that included screening tests for reproductive and developmental toxicity (OECD 422). Sprague-Dawley rats were treated (oral route, corn oil as carrier) daily at dose levels of 0, 50, 250, and 1000 mg MTMS/kg body weight. Test article effects on organ weight were limited to increased liver weight for both males and females in the top two dose levels. Histomorphological findings included increased hepatocellular hypertrophy (both sexes) and increased periportal vacuolation (females only) in the top two dose levels. Thymus weight was decreased in males in the top two dose groups. The thymus appeared normal histomorphologically. Other test article related histomorphological changes included increased incidence of thyroid follicular cell hyperplasia/hypertrophy and severity in males and females in the top two dose levels. There was also an increased incidence of hyperplasia/hypertrophy, apoptosis, and lymphocytic infiltration in the zona reticularis of the adrenal glands in high-dose females and acanthocytosis in high-dose males and females. Clinical pathology evaluations demonstrated a marked prolongation in prothrombin time for males in the top two dose levels. Marked elevation in blood platelet count was observed in both males and females at the high dose. Serum total protein was elevated in high-dose males and in females from the top two dose levels. Serum total cholesterol was elevated in females from the top two dose levels. There were no test article related effects on any of the reproductive and

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developmental endpoints. Because this study is considered to be a screening of repeated-dose and reproductive/developmental toxicity, the results do not provide sufficient information needed to interpret potential relevance to human health and are not indicative of a specific toxicity. This type of study is commonly used as a screening study to determine whether further testing should be conducted. Also, this study was conducted via the oral route of exposure, which is not a typical route of exposure for either manufacturing or end use applications of MTMS. A longer-term study by a more relevant route of exposure (inhalation) is being conducted to understand these preliminary findings.

A 14-day whole-body inhalation toxicity study of methyltrimethoxysilane (MTMS) in Sprague-Dawley rats (5 males / 5 females per group) was conducted in preparation of dose level selection for a 90-day repeated dose toxicity study. Sprague-Dawley rats were treated six hours per day for 14 consecutive days to exposure levels of 0 (control), 400, 800, 4000 and 8000 ppm MTMS. Signs of excessive urine staining and bloody urine were present following the first or second day of exposure in animals from 4000 and 8000 ppm exposure groups. All animals from the 8000 ppm exposure group and three animals from the 4000 ppm group were euthanized prior to scheduled terminal sacrifice. The primary gross pathology findings in these animals consisted of urinary bladder and kidney effects. Urinary bladder findings included dilation, calculi, abnormal contents and color. Kidney findings included mild to moderate dilation. Additional findings in females from the 4000 ppm exposure group included enlarged adrenal glands, small thymus and a mild gaseous intestinal tract. The relevance of these findings to human health is unknown. Additional testing (90-day repeated dose) is being conducted to better understand these findings.

Special Hazard Information on Components**Carcinogens**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>	
1333-86-4	1.0 - 5.0	Carbon black	IARC Group 2B - Possibly Carcinogenic to Humans.
14808-60-7	0.1 - 1.0	Quartz	IARC Group 1 - Carcinogenic to Humans. NTP - Known to be a Human Carcinogen. ACGIH A2 - Suspected Human Carcinogen.

Reproductive Effects

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>	
556-67-2	0.1 - 1.0	Octamethylcyclotetrasiloxane	Evidence of reproductive effects in laboratory animals.

12. ECOLOGICAL INFORMATION**Environmental Fate and Distribution**

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Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

Can be incinerated in accordance with local regulations.

Call local hazardous waste disposal company or provincial waste authorities for more information.

14. TRANSPORT INFORMATION

Canada Road (Based on IMDG Regulations)

Not subject to local road regulations.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

Call Dow Corning Transportation, (989) 496-8577, if additional information is required.

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION: Class D, Division 2, Subdivision A.
Class D, Division 2, Subdivision B.

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DSL STATUS: All chemical substances in this material are included on or exempted from the DSL.

16. OTHER INFORMATION

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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