

**DOW CORNING CORPORATION
Material Safety Data Sheet****DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE****1. PRODUCT AND COMPANY IDENTIFICATION**

MSDS No.: 04026691

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WHMIS CLASSIFICATION: Class D, Division 2, Subdivision A.**Material Usage: Sealant and adhesive****2. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
1309-37-1	10.0 - 30.0	Iron oxide
1333-86-4	5.0 - 10.0	Carbon black
69991-68-0	3.0 - 7.0	Antimony chromium manganese titanium brown rutile
1185-55-3	1.0 - 5.0	Methyltrimethoxysilane
7429-90-5	1.0 - 5.0	Aluminum
14808-60-7	0.5 - 1.5	Quartz
556-67-2	0.1 - 1.0	Octamethylcyclotetrasiloxane

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

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****Generic Description: Silicone elastomer****Physical Form: Paste****Colour: See product name****Odour: Slight****Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures**

**DOW CORNING CORPORATION
Material Safety Data Sheet****DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE**

within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

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POTENTIAL HEALTH EFFECTSAcute Effects

Eye: Direct contact may cause mild irritation.
 Skin: No significant irritation expected from a single short-term exposure.
 Inhalation: Vapor overexposure may cause drowsiness.
 Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin: No known applicable information.
 Inhalation: No known applicable information.
 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.

4. FIRST AID MEASURES

Eye: Immediately flush with water for 15 minutes.
 Skin: No first aid should be needed.
 Inhalation: Remove to fresh air. Get medical attention if ill effects persist.
 Oral: Get medical attention.
 Comments: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point: Not applicable.

DOW CORNING CORPORATION

Material Safety Data Sheet

DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE

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 (CO₂), 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.

Hazardous Decomposition Products

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

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. 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>
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DOW CORNING CORPORATION

Material Safety Data Sheet

DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE

1309-37-1	Iron oxide	OSHA PEL (final rule) (fume): TWA 10 mg/m ³ . ACGIH TLV (fume), as iron: TWA 5 mg/m ³ .
1333-86-4	Carbon black	OSHA PEL and ACGIH TLV: TWA 3.5 mg/m ³ .
69991-68-0	Antimony chromium manganese titanium brown rutile	Observe limits. Chromium oxide - OSHA PEL and ACGIH TLV, as chromium: TWA 0.5 mg/m ³ . Antimony compounds - OSHA PEL and ACGIH TLV: TWA 0.5 mg/m ³ . Manganese compounds - OSHA PEL: 5 mg/m ³ Ceiling; ACGIH TLV: TWA 0.2 mg/m ³ .
1185-55-3	Methyltrimethoxysilane	Dow Corning guide: TWA 50 ppm. Also see methyl alcohol comments. LD50: 12,500 mg/kg - Oral Rat
7429-90-5	Aluminum	OSHA PEL (final rule): TWA 15 mg/m ³ total dust, 5 mg/m ³ respirable dust. ACGIH TLV: TWA 10 mg/m ³ .
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 0.05 mg/m ³ respirable fraction.
556-67-2	Octamethylcyclotetrasiloxane	Dow Corning guide: TWA 10 ppm. LD50: > 2,000 mg/kg - Oral Rat

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: No special protection needed.

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 or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

**DOW CORNING CORPORATION
Material Safety Data Sheet****DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE**

Eyes:	Use full face respirator.
Skin:	Washing at mealtime and end of shift is adequate.
Inhalation/Suitable Respirator:	Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) 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. 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:	See product name
Odor:	Slight
Odor Threshold:	Not available.
Specific Gravity @ 25°C:	1.52
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.

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.
Hazardous Polymerization:	Hazardous polymerization will not occur.

**DOW CORNING CORPORATION
Material Safety Data Sheet****DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE**

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.

11. TOXICOLOGICAL INFORMATION**Component Toxicology Information**

Inhalation of fumes may result in metal fume fever, a flu-like illness with symptoms of metallic taste, fever and chills, aches, chest tightness, and cough.

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

Repeated inhalation or oral exposure of mice and rats to octamethylcyclotetrasiloxane and decamethylcyclopentasiloxane produced an increase in liver size. No gross histopathological or significant clinical chemistry effects were observed. An increase in liver metabolizing enzymes, as well as a transient increase in the number of normal cells (hyperplasia) followed by an increase in cell size (hypertrophy) were determined to be the underlying causes of the liver enlargement. The biochemical mechanisms producing these effects are highly sensitive in rodents, while similar mechanisms in humans are insensitive. Good industrial hygiene practice minimizes inhalation exposure to any chemical. Dow Corning has set an exposure guideline of 10 ppm TWA for these two materials.

In developmental toxicity studies in which rats and rabbits were exposed to octamethylcyclotetrasiloxane by vapor inhalation at concentrations up to 700 ppm and 500 ppm respectively, no teratogenic effects were observed.

Octamethylcyclotetrasiloxane administered to rats by whole body inhalation at concentrations of 500 and 700 ppm for 70 days prior to mating, through mating, gestation and lactation resulted in decreases in live litter size. Additionally, increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia) were observed at these concentrations. Statistically significant alterations in these parameters were not observed in the lower concentrations evaluated (300 and 70 ppm). In a previous range-finding study, rats exposed to vapor concentrations of 700 ppm had decreases in the number of implantation sites and live litter size. The significance of these findings to humans is not known.

A 2 yr combined chronic/carcinogenicity assay was conducted on octamethylcyclotetrasiloxane (D4). Fischer-344 rats were exposed by whole-body vapor inhalation 6 hrs/day, 5 days/week for up to 104 weeks to 0, 10, 30, 150 or 700 ppm of D4. A statistically significant increase in incidence of (uterine) endometrial cell hyperplasia and uterine adenomas (benign tumors) was observed in female rats at 700 ppm. Since these effects only occurred at 700 ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing OMCTS/D4 would result in a significant risk 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

DOW CORNING CORPORATION

Material Safety Data Sheet

DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE

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 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.

Special Hazard Information on Components

Carcinogens

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>	
1333-86-4	5.0 - 10.0	Carbon black	IARC Group 2B - Possibly Carcinogenic to Humans.
14808-60-7	0.5 - 1.5	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

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

**DOW CORNING CORPORATION
Material Safety Data Sheet****DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE**

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.

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.

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

DOW CORNING CORPORATION
Material Safety Data Sheet**DOW CORNING(R) CONTRACTORS WEATHERPROOFING SEALANT - WHITE****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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