

**DOW CORNING(R) TB/TL/CER SEALANT TRANS WHITE****1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

MSDS No.: 04045038

**SUPPLIER:**Dow Corning Canada Inc.  
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**MANUFACTURER:**Dow Corning Corporation  
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**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 Sealant**Physical Form:** Paste**Colour:** See product name**Odour:** Acetic acid**Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.**

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**POTENTIAL HEALTH EFFECTS**Acute Effects

Eye: Direct contact may cause moderate irritation.

Skin: May cause moderate irritation.

Inhalation: Irritates respiratory passages very slightly.

Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

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Skin: No known applicable information.

Inhalation: No known applicable information.

Oral: No known applicable information.

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>
7631-86-9	10.0 - 30.0	Silica, amorphous
1309-37-1	3.0 - 7.0	Iron oxide
69991-68-0	3.0 - 7.0	Antimony chromium manganese titanium brown rutile
4253-34-3	1.0 - 5.0	Methyltriacetoxysilane
17689-77-9	1.0 - 5.0	Ethyltriacetoxysilane
7429-90-5	1.0 - 5.0	Aluminum
1333-86-4	0.5 - 1.5	Carbon black
556-67-2	0.1 - 1.0	Octamethylcyclotetrasiloxane

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

**4. FIRST AID MEASURES**

Eye: Immediately flush with water for 15 minutes. Get medical attention.

Skin: Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.

Inhalation: No first aid should be needed.

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Oral: No first aid should be needed.

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

**5. FIRE FIGHTING MEASURES**

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<sub>2</sub>), 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 acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact.

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**

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Consult local authorities for acceptable provincial values.

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
7631-86-9	Silica, amorphous	OSHA PEL (final rule): TWA 80mg/m3/%SiO <sub>2</sub> . NIOSH REL: TWA 6mg/m3.
1309-37-1	Iron oxide	OSHA PEL (final rule) (fume): TWA 10 mg/m3. ACGIH TLV: TWA 5 mg/m3 respirable fraction.
69991-68-0	Antimony chromium manganese titanium brown rutile	Observe limits. Chromium oxide - OSHA PEL and ACGIH TLV, as chromium: TWA 0.5 mg/m3. Antimony compounds - OSHA PEL and ACGIH TLV: TWA 0.5 mg/m3. Manganese compounds - OSHA PEL: 5 mg/m3 Ceiling; ACGIH TLV: TWA 0.2 mg/m3.
4253-34-3	Methyltriacetoxysilane	See acetic acid comments. LD50: 2,060 mg/kg - Oral Rat
17689-77-9	Ethyltriacetoxysilane	See acetic acid comments. LD50: 1,460 mg/kg - Oral Rat
7429-90-5	Aluminum	OSHA PEL (final rule): TWA 15 mg/m3 total dust, 5 mg/3 respirable dust. ACGIH TLV: TWA 10 mg/m3.
1333-86-4	Carbon black	OSHA PEL and ACGIH TLV: TWA 3.5 mg/m3.
556-67-2	Octamethylcyclotetrasiloxane	Dow Corning guide: TWA 10 ppm. LC50: 36 mg/L - Inhalation Rat ; 4 Hrs LD50: > 2,000 mg/kg - Oral Rat

Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 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: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

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Suitable Gloves: Silver Shield(R). 4H(R).  
Inhalation: No respiratory protection should be needed.  
Suitable Respirator: None should be needed.

**Personal Protective Equipment for Spills**

Eyes: Use proper protection - safety glasses as a minimum.  
Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.  
Inhalation/Suitable Respirator: No respiratory protection should be needed.  
Precautionary Measures: Avoid eye contact. Avoid skin contact. Use reasonable care.  
Comments: Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection.

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: Acetic acid  
Odor Threshold: Not available.  
Specific Gravity @ 25°C: 1.04  
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

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specifications.

**10. STABILITY AND REACTIVITY**

Chemical Stability: Stable.

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: Metal oxides. Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde. Iodine compounds. Sulfur oxides. Nitrogen oxides.

**11. TOXICOLOGICAL INFORMATION****Component Toxicology Information**

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.

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**Special Hazard Information on Components**

**Carcinogens**

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

**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**

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.

