

**TSE3941  
SILICONE ELECTRONICS ADHESIVE****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Manufactured By:** Momentive performance material  
260 Hudson River Rd  
Waterford NY 12188

**Revised:** 03/15/2011  
**Preparer:** PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS  
**CHEMTREC** 1-800-424-9300

**Chemical Family/Use:** Sealant  
**Formula:** Mixture

**HMIS**

Flammability: 1      Reactivity: 0      Health: 1

**NFPA**

Flammability: 1      Reactivity: 0      Health: 1

**2. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

WARNING! Irritating to eyes, respiratory system and skin. May be harmful if swallowed. May cause adverse reproductive effects. Adverse reproductive effects reported in animals.

**Form:** Liquid      **Color:** White      **Odor:** Ammonia.

**POTENTIAL HEALTH EFFECTS****INGESTION**

May be harmful if swallowed.

**SKIN**

May cause mild skin irritation.

**INHALATION**

Causes mild respiratory tract irritation. Applies in uncured state.

**EYES**

Eye irritation on contact with the uncured product.

**MEDICAL CONDITIONS AGGRAVATED**

None known.

**SUBCHRONIC (TARGET ORGAN )**

May cause liver effects.

**CHRONIC EFFECTS / CARCINOGENICITY**

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or

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suspected carcinogen by NTP, IARC, or OSHA.

**ROUTES OF EXPOSURE**

Dermal; Eye

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>PRODUCT COMPOSITION</u>	<u>CAS REG NO.</u>	<u>WGT. %</u>
<b><u>A. HAZARDOUS</u></b>		
Methyltrimethoxysilane	1185-55-3	1 - 5 %
CYCLOPENTYLSILAZANE-AMINO SILOXANE COPOLYMER, METHOXY TERMINATED	134759-20-9	1 - 5 %
<b><u>B. NON-HAZARDOUS</u></b>		
Methoxypolydimethylsiloxane	68037-58-1	30 - 60 %
Titanium Dioxide	13463-67-7	10 - 30 %

**4. FIRST AID MEASURES****INGESTION**

Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

**SKIN**

To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water.

**INHALATION**

If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

**EYES**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

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Treatment is symptomatic and supportive.

**5. FIRE-FIGHTING MEASURES**

**FLASH POINT:** 132 °C; 270 °F  
**IGNITION TEMPERATURE:** 450 °C; 842 °F  
**FLAMMABLE LIMITS IN AIR - LOWER (%):** Not applicable  
**FLAMMABLE LIMITS IN AIR - UPPER (%):** Not applicable

**SENSITIVITY TO MECHANICAL IMPACT:** No

**SENSITIVITY TO STATIC DISCHARGE**

Sensitivity to static discharge is not expected.

**EXTINGUISHING MEDIA**

All standard extinguishing agents are suitable.

**SPECIAL FIRE FIGHTING PROCEDURES**

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

**6. ACCIDENTAL RELEASE MEASURES****ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section. Increase area ventilation.

**7. HANDLING AND STORAGE****PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Avoid contact with skin and eyes. Use only in well-ventilated areas. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the finger and hands. Residual sealant may remain on fingers for several days and transfer to lenses, resulting in eye irritation. Keep out of reach of children.

**STORAGE**

Store away from heat, sources of ignition, and incompatibles.

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Eyewash stations; Showers; Exhaust ventilation

**RESPIRATORY PROTECTION**

If exposure limits may be exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. A NIOSH/MSHA approved respirator with an organic vapor cartridge is generally acceptable. Supplied air respirators may be required for high vapor concentrations. Respiratory protection must be provided in accordance with OSHA regulations (see 29 CFR 1910.134).

**PROTECTIVE GLOVES**

Rubber or plastics gloves

**EYE AND FACE PROTECTION**

Safety glasses

**OTHER PROTECTIVE EQUIPMENT**

Wear suitable protective clothing and eye/face protection.

**Exposure Guidelines**

<b>Component</b>	<b>CAS RN</b>	<b>Source</b>	<b>Value</b>
Titanium Dioxide	13463-67-7	ACGIH, TWA	10 mg/m <sup>3</sup>
Titanium Dioxide	13463-67-7	OSHA Z1, PEL	Total dust. 15 mg/m <sup>3</sup>
QUARTZ	14808-60-7	ACGIH, TWA	Respirable fraction. 0.025 mg/m <sup>3</sup>

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>BOILING POINT - C &amp; F:</b>	Not applicable
<b>VAPOR PRESSURE (20 C) (MM HG):</b>	Not applicable
<b>VAPOR DENSITY (AIR=1):</b>	No data available.
<b>FREEZING POINT:</b>	Not applicable
<b>PHYSICAL STATE:</b>	Liquid
<b>Odor:</b>	Ammonia.
<b>Color:</b>	White
<b>EVAPORATION RATE (BUTYL ACETATE=1):</b>	No data available.
<b>SPECIFIC GRAVITY (WATER=1):</b>	ca. 1.65
<b>DENSITY:</b>	1.65 g/cm <sup>3</sup>
<b>ACID / ALKALINITY (MEQ/G):</b>	No data available.

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**pH:** No data available.  
**SOLUBILITY IN WATER (20 C):** Insoluble  
**VOLATILE ORGANIC CONTENT:** < 2 %(m) No data available.

**10. STABILITY AND REACTIVITY****STABILITY**

Stable

**HAZARDOUS POLYMERIZATION**

Hazardous polymerisation does not occur.

**HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS**

Carbon dioxide; Carbon Monoxide.; Formaldehyde.; Silicon dioxide.; Nitrogen Oxides; Methanol; Ammonia.; This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150°C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

**INCOMPATIBILITY (MATERIALS TO AVOID)**

None known.

**CONDITIONS TO AVOID**

None known.

**11. TOXICOLOGICAL INFORMATION****ACUTE ORAL**

Remarks: No data available.

**ACUTE DERMAL**

Remarks: No data available.

**ACUTE INHALATION**

Remarks: No data available.

**OTHER**

Octamethylcyclotetrasiloxane

Ingestion: Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appear normal) as well as hypertrophy (increased cell size).

Inhalation: In inhalation studies, laboratory rodents exposed to octamethylcyclotetrasiloxane (300 ppm five days week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liverweights returned to normal. Microscopic

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examination of the liver cells did not show any evidence of pathology. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents.

Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) with octamethylcyclotetrasiloxane (D4). Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found.

Interim results from a two generation reproductive study in rats exposed to 500 and 700 ppm D4 (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended periods of off-spring delivery (dystocia). These results were not observed at the 70 and 300 ppm dosing levels.

Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150, or 700 ppm D4 showed test-article related effects in the kidney (male and female) and uterus of rats exposed for 12 to 24 months. These effects include increased kidney weight and severity of chronic nephropathy, increased uterine weight, increased incidence of endometrial cell hyperplasia, and an increased incidence of endometrial adenomas. All of these effects are limited to the 700 ppm exposure group.

These results have been shown to be rat-specific. Further studies are ongoing.

In developmental toxicity studies, rats and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500 ppm respectively. No teratogenic effects (birth defects) were observed in either study.

, Contains dibutyl tin dilaurate which may cause birth defects and reproductive effects based on animal data.

**SENSITIZATION**

No data available.

**SKIN IRRITATION**

No data available.

**EYE IRRITATION**

No data available.

**MUTAGENICITY**

No data available.

**OTHER EFFECTS OF OVEREXPOSURE**

Methanol released during curing., Ammonia released during curing.

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No data available.

**DISTRIBUTION**

No data available.

**CHEMICAL FATE**

No data available.

**13. DISPOSAL CONSIDERATIONS****DISPOSAL METHOD**

Disposal should be made in accordance with federal, state and local regulations.

**14. TRANSPORT INFORMATION****Further Information:**

This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

**15. REGULATORY INFORMATION****Inventories**

Australia Inventory of Chemical Substances (AICS)	n (Negative listing)	
EU list of existing chemical substances	y (positive listing)	
Japan Inventory of Existing & New Chemical Substances (ENCS)	y (positive listing)	
China Inventory of Existing Chemical Substances	y (positive listing)	
Korea Existing Chemicals Inventory (KECI)	y (positive listing)	
Canada DSL Inventory	q (quantity restricted)	
Canada NDSL Inventory	n (Negative listing)	
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing)	
TSCA list	y (positive listing)	On TSCA Inventory

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

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**US Regulatory Information****SARA (311,312) HAZARD CLASS**

Acute Health Hazard; Chronic Health Hazard

**SARA (313) CHEMICALS****CALIFORNIA PROPOSITION 65**

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.  
14808-60-7, Quartz.

**Canadian Regulatory Information****WHMIS HAZARD CLASS**

D2A - Very Toxic Material Causing Other Toxic Effects  
D2B - Toxic Material Causing Other Toxic Effects

**16. OTHER INFORMATION****OTHER**

C = ceiling limit      NEGL = negligible  
EST = estimated      NF = none found  
NA = not applicable      UNKN = unknown  
NE = none established      REC = recommended  
ND = none determined      V = recommended by vendor  
SKN = skin      TS = trade secret  
R = recommended      MST = mist  
NT = not tested      STEL = short term exposure limit  
ppm = parts per million      ppb = parts per billion

By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2)., These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is 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.