

# Safety Data Sheet

## SiArmor Hand Sanitizing Gel

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Revision Date: 2015/07/09

### 1. PRODUCT AND COMPANY IDENTIFICATION

QuadSil Inc.  
210 Arrow Cove  
Midland, MI 48642

24 Hour Emergency Telephones: (989) 496-1434

Generic Description:	Silicone		
Physical Form:	Thixotropic Solid		
Color:	Colorless to light straw		
Odor:	Odorless		
NFPA Profile:	Health 1	Flammability 2	Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

### 2. OSHA HAZARDOUS COMPONENTS

CAS Number	Wt %	Component Name
541-02-6	>50%	Decamethylcyclopentasiloxane
1073606-36-6	>5%	PPG-3 Benzyl Octanoate
027668-52-6	<1%	Octadecylaminodimethyltrimethoxy-silylpropyl Ammonium Chloride
63449-41-2	<0.5%	benzalkonium chloride

The above components are hazardous as defined in 29 CFR 1910.1200.

### 3. HAZARDS IDENTIFICATION

#### Potential Health Effects

#### Acute Effects

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

#### Prolonged/Repeated Exposure Effects

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.

### 4. FIRST AID MEASURES

Eye:	Immediately flush with water for 15 minutes.
Skin:	No first aid should be needed.
Inhalation:	No first aid should be needed.
Oral:	No first aid should be needed.
Comments:	Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

Flash Point: 195.8°F / 91°C (Seta Closed Cup)  
Autoignition Temperature: Not determined.  
Flammability Limits in Air: Not determined.  
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. Use water spray to keep fire exposed containers cool. Determine the need to evacuate or isolate the area according to your local emergency plan.

Unusual Fire Hazards: Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.

### 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. Silicon dioxide. Formaldehyde.

## 6. ACCIDENTAL RELEASE MEASURES

### Containment/Clean up:

Remove possible ignition sources. Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal.

Final cleaning may require use of steam, solvents or detergents. Clean area as appropriate since some silicone materials, even in small quantities, may present a slipping hazard. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and 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. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call (989) 496-1434, if additional information is required.

## 7. HANDLING AND STORAGE

Use with adequate ventilation. Avoid eye contact.

Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component Exposure Limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
541-02-6	Decamethylcyclopentasiloxane	See Section 11 comments

### Engineering Controls

Local Ventilation: None should be needed  
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: 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: Washing at mealtime and end of shift is adequate.  
Inhalation/Suitable  
Respirator: No respiratory protection should be needed.  
Precautionary Measures: Avoid eye contact. Use reasonable care.

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: Thixotropic Solid  
Color: Colorless to light straw  
Odor: Odorless  
Specific Gravity @ 25°C: 0.94  
Viscosity: 400000 cSt  
Freezing/Melting Point: Not determined.  
Boiling Point: >35C/95F  
Vapor Pressure @ 25°C: Not determined.  
Vapor Density: Not determined.  
Solubility in Water: Not determined.  
pH: Not determined.  
Volatile Content: Not determined.

Note: The above information is not intended for use in preparing product specifications. Contact Quad Sil Inc. before writing 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.

## **11. TOXICOLOGICAL INFORMATION**

### **Special Hazard Information on Components**

	<b><u>Species</u></b>	<b><u>Test Results</u></b>	<b><u>Type of Test</u></b>
Eye Irritation:	Rabbit	Non-irritating	
Skin Irritation:	Rabbit	Non-irritating	
Oral LD50:	Rat	>140 mg/Kg	
Dermal LD50:	Rat	>1420 mg/kg	
Sensitization:	Guinea Pig	Negative	Buehler
Mutagenicity	In Vitro	Negative	Ames

## **Component Toxicology Information**

Repeated inhalation or oral exposure of mice and rats to 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 this material.

A 2 year combined chronic/carcinogenicity assay was conducted on decamethylcyclopentasiloxane (D5). Fischer-344 rats were exposed by whole-body vapor inhalation 6 hrs/day, 5 days/week for up to 24 months to 0, 10, 40, or 160 ppm of D5. A statistically significant increase in the trend for uterine endometrial tumors was observed in female rats exposed for 24 months at 160 ppm. Whether or not this increase in incidence is truly related to the exposure to decamethylcyclopentasiloxane is questionable and yet to be determined. The 160 ppm exposure concentration greatly exceeds workplace or consumer exposure. It is unlikely that industrial, commercial or consumer uses of products containing D5 would result in a significant risk to humans. The exposure guideline will be reevaluated when a better understanding of the significance of this new data is developed.

## **Special Hazard Information on Components**

No known applicable information.

## **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** **RCRA Hazard Class (40 CFR 261)**

When a decision is made to discard this material, as received, is it classified as a hazardous waste? Yes

Characteristic Waste:

Reactive: D003

State or local laws may impose additional regulatory requirements regarding disposal.  
Call (989) 496-1434, if additional information is required.

#### **14. TRANSPORT INFORMATION**

##### **DOT Road Shipment Information (49 CFR 172.101)**

Proper Shipping Name: FLAMMABLE SOLID, ORGANIC, N.O.S.

Hazard Technical Name: CYCLOSILOXANE

Hazard Class: 4.1

UN/NA Number: UN1325

Packing Group: II

##### **Ocean Shipment (IMDG)**

Proper Shipping Name: FLAMMABLE SOLID, ORGANIC, N.O.S.

Hazard Technical Name: CYCLOSILOXANE

Hazard Class: 4.1

UN Number: 1325

Packing Group: II

Hazard Label(s): FLAMMABLE SOLID

Marine Pollutant: Not Applicable

##### **Air Shipment (IATA)**

Proper Shipping Name: FLAMMABLE SOLID, ORGANIC, N.O.S.

Hazard Technical Name: CYCLOSILOXANE

Hazard Class: 4.1

UN Number: 1325

Packing Group: II

Hazard Label(s): FLAMMABLE SOLIDS

## 15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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

### EPA SARA Title III Chemical Listings

#### **Section 302 Extremely Hazardous Substances (40 CFR 355):**

None.

#### **Section 304 CERCLA Hazardous Substances (40 CFR 302):**

None.

#### **Section 311/312 Hazard Class (40 CFR 370):**

Acute:	No
Chronic:	No
Fire:	Yes
Pressure:	No
Reactive:	No

#### **Section 313 Toxic Chemicals (40 CFR 372):**

None present or none present in regulated quantities.

### Supplemental State Compliance Information

#### **California**

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

#### **Massachusetts**

No ingredient regulated by MA Right-to-Know Law present.

#### **New Jersey**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
541-02-6	>60.0	Decamethylcyclopentasiloxane
213629-14-2	10.0 - 30.0	Dimethyl methylhydrogen siloxane reaction product with 1,5-hexadiene
None	1.0 - 5.0	Dimethylcyclosiloxane

**Pennsylvania**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
541-02-6	>60.0	Decamethylcyclopentasiloxane
213629-14-2	10.0 - 30.0	Dimethyl methylhydrogen siloxane reaction product with 1,5-hexadine

**16. OTHER INFORMATION**

Prepared by: QuadSil Inc.

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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