1. **Product and company identification**

1.1 Identification of the substance or preparation:

- **Commercial product name:** ELASTOSIL® C 1500 A US
- **Product group:** RTV Silicone Rubber
- **Use of substance / preparation:** Industrial. Mold making

1.2 Company/undertaking identification:

- **Manufacturer/distributor:** Wacker Chemical Corporation
  
  3301 Sutton Road
  
  Adrian, MI 49221-9397
  
  USA

- **Customer information:**
  
  InfoLine:
  
  Tel (517) 264-8240, Fax (517) 264-8740

  Hours of operation:
  
  Monday - Friday, 8 am to 5 pm (eastern standard time)

- **Corporate website:** www.wacker.com

- **Emergency telephone no. (24h):** (517) 264-8500

- **Transportation emergency:**
  
  (800) 424-9300 (CHEMTREC, USA)
  
  (703) 527-3887 (CHEMTREC, international)

This MSDS was prepared by the Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

2. **Composition/information on ingredients**

2.1 Chemical characterization (preparation)

- **Chemical characteristics:**
  
  Polydimethylsiloxane with vinyl groups and auxiliary

2.2 Information on ingredients:

<table>
<thead>
<tr>
<th>Type</th>
<th>CAS No.</th>
<th>Substance</th>
<th>Content [wt. %]</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERU</td>
<td>556-67-2</td>
<td>Octamethyl cyclotetrasiloxane</td>
<td>0.1</td>
<td>&lt;1.0</td>
</tr>
</tbody>
</table>

**Type:** HYD - by-product upon hydrolysis, INHA - ingredient, NEBE - by-product, MONO - residual monomer, VERU - impurity, VUL - by-product upon vulcanization. **Note:** C1 - IARC carcinogen, C2 - NTP carcinogen, C3 - OSHA carcinogen, NH - non-hazardous, R - reproductive toxin.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in Section 2 are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product.

3. **Hazard identification**

3.1 Hazards classifications

- **HMIS® rating (product as packaged):**
  
  Health: 1
  
  Fire: 1
  
  Reactivity: 0
  
  PPE: B

  (HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.

- **Canadian WHMIS Classification:** D2A

3.2 Emergency overview and potential hazards

This material is not hazardous under OSHA criteria. Silicone based materials have a viscosity factor that can substantially reduce or eliminate traction. Be aware that improper applications of such products can cause serious injury or death. Please use warning labels on consumer products.
Physical Hazards:
No known physical hazards.

Acute health effects
Route of entry or possible contact:
eyes, skin, inhalation (volatile by-products).

Eye contact:
May cause slight eye irritation.

Skin contact:
No acute toxic skin effects are expected.

Inhalation:
No acute toxic respiratory tract effects are expected.

Ingestion:
Ingestion is not expected in industrial use.

Additional information on acute health effects:
The health hazard evaluation is based on test results and/or on known properties of ingredients.

3.3 Further information:
Chronic health effects:
Impurity: Prolonged or repeated inhalation of vapors may have adverse effects on the reproductive system, based on animal testing of a component of this material.

Medical conditions which may be aggravated by exposure:
none known

Target organs affected:
Female reproductive system.

Signs and Symptoms of Exposure:
Refer to Acute Health Effects, listed above.

Carcinogens/Reproductive toxins:
Based on animal tests. This material contains >= 0.1% of a substance which significantly increased the incidence of benign tumors in animal experiments. This material contains between 0.1% and 1% of a known reproductive toxin. Investigations of the mechanism of tumor formation are ongoing to evaluate the relevance to humans. Although animal testing has indicated that there is some limited carcinogenic potential for decamethylcyclopentasiloxane (D5) in rats, D5 has not been classified by IARC, NTP or OSHA as a known or potential human carcinogen. Further studies are ongoing to clarify the carcinogenic potential of D5 and the relevance to humans.

See Section 11 for Toxicological Information, if any.

4. First-aid measures

4.1 General information:
Get medical attention if irritation occurs or if breathing becomes difficult. Remove contaminated clothing and shoes.

4.2 After inhalation
No special treatment is required.

4.3 After contact with the skin
For skin contact, immediately wipe away excess material. Use a waterless hand cleaner to remove as much of the remaining material as possible. Wash with soap and water.

4.4 After contact with the eyes
If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

4.5 After swallowing
No special treatment is required.

4.6 Advice for the physician
Treat symptomatically.
5. Fire-fighting measures

5.1 Flammable properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>&gt; 234 °C (&gt; 453 °F)</td>
<td>(not specified)</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 100 °C (&gt; 212 °F)</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>&gt; 400 °C (&gt; 752 °F)</td>
<td></td>
</tr>
</tbody>
</table>

5.2 Fire and explosion hazards:
This material will burn with a lazy smoldering flame. This material does not present any unusual fire or explosion hazards.

5.3 Recommended extinguishing media:
- AFFF alcohol compatible foam.
- Carbon dioxide.
- Dry chemical.
- Water - Use Fine Spray or Fog. Water may be used to cool tanks and structures adjacent to the fire.

5.4 Unsuitable extinguishing media:
- None.

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
Hazardous decomposition products: carbon dioxide, carbon monoxide, formaldehyde, silicon dioxide and incompletely burnt hydrocarbons.

5.6 Fire fighting procedures:
- Full turn-out gear and Self Contained Breathing Apparatus (SCBA) should be worn when fighting large fires.

6. Accidental release measures

6.1 Precautions:
- Secure the area. Obtain appropriate PPE, supplies, and equipment prior to attempting any response.
- HAZWOPER PPE Level: D

6.2 Containment:
- No special measures required.
- Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center’s toll free phone number (800) 424-8802.

6.3 Methods for cleaning up:
- Scoop up large quantities after dusting surfaces with sand or Fuller’s earth to prevent sticking. Sweep or scrape up the spilled material and place in an appropriate chemical waste container.

7. Handling and storage

7.1 Handling
- Precautions for safe handling:
  - Avoid contact with eyes, skin and clothing. Keep container closed when not in use. Wash thoroughly after handling.
- Precautions against fire and explosion:
  - No special precautions against fire and explosion required.

7.2 Storage
- Conditions for storage rooms and vessels:
  - Store in a dry and sheltered place.
- Advice for storage of incompatible materials:
  - No restriction.
- Further information for storage:
  - Store in a dry and cool place.
8. Exposure controls and personal protection

8.1 Engineering controls

Ventilation:
Use with adequate ventilation.

Local exhaust:
No special ventilation required.

8.2 Associate substances with specific control parameters such as limit values

none known

Further information:
Maximum concentration at workplace recommended by producer: octamethylcyclotetrasiloxane (D4, CAS no. 556-67-2) = 10 ppm (123 mg/m3)

8.3 Personal protection equipment (PPE)

Respiratory protection:
Respiratory protection is not normally required.

Hand protection:
Any liquid-tight rubber or vinyl gloves.

Eye protection:
Safety glasses with side shields or chemical safety goggles.

Other protective clothing or equipment:
Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

8.4 General hygiene and protection measures:

Follow standard industrial hygiene practices when using this material. When handling do not eat, drink, smoke or apply cosmetics. Wash thoroughly after handling.

9. Physical and chemical properties

9.1 Appearance

Physical state / form: liquid
Colour: colourless
Odour: odourless

9.2 Safety parameters

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point / melting range</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 100 °C (&gt; 212 °F)</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 234 °C (&gt; 453 °F)</td>
<td>(not specified)</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>&gt; 400 °C (&gt; 752 °F)</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>1.10 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Water solubility / miscibility</td>
<td>insoluble</td>
<td></td>
</tr>
<tr>
<td>pH-Value</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Viscosity (dynamic)</td>
<td>32400 mPa.s</td>
<td></td>
</tr>
</tbody>
</table>

9.3 Further information

Percent Volatiles: 0.39 %
Corrosive to Steel or Aluminum: Not corrosive to steel or aluminum.
10. Stability and reactivity

10.1 General information:
Stable under normal conditions of use.

10.2 Conditions to avoid
Although this product is not expected to react with commonly used materials of construction and process equipment, it is advised that any rubber or plastic items such as hoses and gaskets be tested prior to large scale processing to ensure there is no degradation of performance or durability.

10.3 Materials to avoid
Relatively nonreactive. No significant reactivity with water.

10.4 Hazardous decomposition products
Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

10.5 Further information:
Hazardous polymerization cannot occur.

11. Toxicological information

11.1 Information on toxicological effects
The toxicological results listed are based on tests with similar materials. The toxicology information listed below is based on the byproduct(s) of the material.

11.1.1 Acute toxicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.2 Skin corrosion/irritation
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.3 Serious eye damage / eye irritation
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.4 Respiratory or skin sensitization
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.5 Germ cell mutagenicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.6 Carcinogenicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.7 Reproductive toxicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.8 Specific target organ toxicity (single exposure)
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.9 Specific target organ toxicity (repeated exposure)
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.10 Aspiration hazard
Assessment:
Based on the physical-chemical properties of the product no aspiration hazard must be expected.

11.1.11 Further toxicological information
Toxicity to reproduction/fertility: Impurity: In a two generation reproductive study via inhalation with OMCTS/D4 rats, decreased mean live litter size and prolonged labor (dystocia) were observed at the 500 ppm and 700 ppm exposure levels. The relevance of these effects in humans cannot be determined at this time. Because these effects are only seen at very high exposure levels, it is unlikely that industrial, commercial and/or consumer uses of products containing OMCTS/D4 would result in a significant risk to humans. Based on animal experiments there is no indication of developmental effects.

Chronic toxicity / carcinogenicity: Impurity: In a two year combined chronic toxicity and carcinogenicity inhalation study with decamethylcyclopentasiloxane (D5) in rats, an increased incidence for (uterine) endometrial tumors was observed in the highest exposure level of 160 ppm in female rats. The same effects were not seen at the other dose levels of 10 and 40 ppm. Whether or not this increase in incidence is truly related to the exposure to D5 is questionable and yet to be determined. Based on our present knowledge it is unlikely that industrial, commercial or consumer uses of products containing D5 would result in a significant risk to humans. In a two year combined chronic toxicity and carcinogenicity inhalation study with octamethylcyclotetrasiloxane (OMCTS/D4) in rats, an increased incidence of (uterine) endometrial cell hyperplasia and endometrial adenomas were observed at the highest exposure level of 700 ppm in female rats. These same effects were not seen at the other dose levels of 10, 30, and 150 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.

12. Ecological information

12.1 Toxicity
Assessment:
For the product as a whole, no test data is available. According to current knowledge adverse effects on water purification plants are not expected.

12.2 Persistence and degradability
Assessment:
Silicone content: biologically not degradable. Separation by sedimentation.

12.3 Bioaccumulative potential
Assessment:
No adverse effects expected.

12.4 Mobility in soil
Assessment:
Insoluble in water.

12.5 Other adverse effects
none known

13. Disposal considerations

13.1 Product disposal
Recommendation:
Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable governmental regulations. State and local regulations may be more stringent than Federal regulations.
13.2 Packaging disposal
Recommendation:
Uncleaned containers should not be reused to hold another material due to the potential for reaction between residual product and incompatible materials. Uncleaned packaging should be treated with the same precautions as the material. After emptying contaminated containers may be cleansed and recycled.

14. Transport information

14.1 US DOT & CANADA TDG SURFACE
Valuation ........................................: Not regulated for transport
Corrosive to Steel or Aluminum ..........: Not corrosive to steel or aluminum.

14.2 Transport by sea IMDG-Code
Valuation ........................................: Not regulated for transport

14.3 Air transport ICAO-TI/IATA-DGR
Valuation ........................................: Not regulated for transport

15. Regulatory information

15.1 U.S. Federal regulations

TSCA inventory status and TSCA information:
This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

TSCA 12(b) Export Notification:
This material does not contain any TSCA 12(b) regulated chemicals.

CERCLA Regulated Chemicals:
This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:
This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:
This product does not present any SARA 311/312 hazards.

SARA 313 Chemicals:
This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS (Hazardous Air Pollutants):
This material does not contain any hazardous air pollutants.

15.2 U.S. State regulations

California Proposition 65 Carcinogens:
This material does not contain any chemicals known to the state of California to cause cancer.

California Proposition 65 Reproductive Toxins:
This material does not contain any chemicals known to the State of California to cause reproductive effects.

Massachusetts Substance List:
This material contains no listed components.

New Jersey Right-to-Know Hazardous Substance List:
This material contains no listed components.

Pennsylvania Right-to-Know Hazardous Substance List:
This material contains no listed components.

15.3 Canadian regulations
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 Hazard Classes:
D2A

DSL Status:
This material or its components are listed on the Canadian Domestic Substances List.

Non-DSL Chemicals:
This material does not contain any non-DSL chemicals.

Canadian Ingredient Disclosure List:
This material contains no listed components.

15.4 Other international regulations

Details of international registration status
Listed on or in accordance with the following inventories:
- TSCA - USA
- DSL - Canada
- AICS - Australia
- IECSC - China
- EINECS - Europe
- ENCS - Japan
- PICCS - Philippines

16. Other information

16.1 Additional information:
This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This MSDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.

All deliveries are subject to the WACKER SILICONES Health Care Policy, which is available at www.wacker.com.

16.2 Glossary of Terms:
- ACGIH - American Conference of Governmental Industrial Hygienists
- DOT - Department of Transportation
- mPa*s - Milli Pascal-Seconds
- OSHA - Occupational Safety and Health Administration
- PEL - Permissible Exposure Limit
- ppm - Parts per Million
- SARA - Superfund Amendments and Reauthorization Act
- STEL - Short Term Exposure Limit
- TSCA - Toxic Substances Control Act
- TWA - Time Weighted Average
- WHMIS - Canadian Workplace Hazardous Materials
- Identification System

Flash point determination methods ................................. Common name
- ASTM D56................................................................. Tagliabue (Tag) closed cup
- ASTM D92, DIN 51376, ISO 2592 .............................. Cleveland open cup
- ASTM D93, DIN 51758, ISO 2719 .............................. Pensky-Martens closed cup
- ASTM D3278, DIN 55680, ISO 3679 .......................... Setalflash or Rapid closed cup
- DIN 51755............................................................... Abel-Pensky closed cup

16.3 Conversion table:
Pressure:.................... 1 hPa * 0.75 = 1 mm Hg = 1 torr; 1 bar = 1000 hPa
Viscosity:.................... 1 mPa*s = 1 centipoise (cP)
1. Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: ELASTOSIL® C 1500 B US

Product group: RTV Silicone Rubber

Use of substance / preparation: Industrial, Mold making

1.2 Company/undertaking identification:

Manufacturer/distributor: Wacker Chemical Corporation
3301 Sutton Road
Adrian, MI 49221-9397
USA

Customer information: InfoLine:
Tel (517) 264-8240, Fax (517) 264-8740
Hours of operation: Monday - Friday, 8 am to 5 pm (eastern standard time)
Corporate website: www.wacker.com

Emergency telephone no. (24h): (517) 264-8500
Transportation emergency: (800) 424-9300 (CHEMTREC, USA)
(703) 527-3887 (CHEMTREC, international)

This MSDS was prepared by the Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

2. Composition/information on ingredients

2.1 Chemical characterization (preparation)

Chemical characteristics
Polydimethylsiloxane with hydrogen groups + Polydimethylsiloxane with vinyl groups and auxiliary

2.2 Information on ingredients:

<table>
<thead>
<tr>
<th>Type</th>
<th>CAS No.</th>
<th>Substance</th>
<th>Content [wt. %]</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>Upper</td>
<td></td>
</tr>
<tr>
<td>VERU</td>
<td>556-67-2</td>
<td>Octamethyl cyclotetrasiloxane</td>
<td>0.1</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>INHA</td>
<td>58037-59-2</td>
<td>Polydimethyl hydrogenmethyl siloxane</td>
<td>&gt;=1.5</td>
<td>&lt;=2.5</td>
</tr>
<tr>
<td>NEBE</td>
<td>1333-74-0</td>
<td>hydrogen gas</td>
<td>varies</td>
<td>varies</td>
</tr>
</tbody>
</table>


Due to the physical nature of this material (liquid), exposure to dusts/particulates is not expected.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in Section 2 are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product.

3. Hazards identification

3.1 Hazards classifications

HMIS® rating (product as packaged):
Health: 1 Fire: 1 Reactivity: 2 PPE: B

(HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.

Canadian WHMIS Classification: D2A

3.2 Emergency overview and potential hazards

This material is not hazardous under OSHA criteria.
Physical Hazards:
Under certain conditions this material may generate flammable hydrogen gas.

Acute health effects
Route of entry or possible contact:
eyes, skin, inhalation (volatile by-products).

Eye contact:
May cause slight eye irritation.

Skin contact:
No acute toxic skin effects are expected.

Inhalation:
No acute toxic respiratory tract effects are expected.

Ingestion:
Ingestion is not expected in industrial use.

Additional information on acute health effects:
The health hazard evaluation is based on test results and/or on known properties of ingredients.

3.3 Further information:

Chronic health effects:
Impurity: Prolonged or repeated inhalation of vapors may have adverse effects on the reproductive system, based on animal testing of a component of this material.

Medical conditions which may be aggravated by exposure:
None known

Target organs affected:
Female reproductive system.

Signs and Symptoms of Exposure:
Refer to Acute Health Effects, listed above.

Carcinogens/Reproductive toxins:
Based on animal tests. This material contains >= 0.1% of a substance which significantly increased the incidence of benign tumors in animal experiments. This material contains between 0.1% and 1% of a known reproductive toxin. Investigations of the mechanism of tumor formation are ongoing to evaluate the relevance to humans. Although animal testing has indicated that there is some limited carcinogenic potential for decamethylcyclopentasiloxane (D5) in rats, D5 has not been classified by IARC, NTP or OSHA as a known or potential human carcinogen. Further studies are ongoing to clarify the carcinogenic potential of D5 and the relevance to humans.

See Section 11 for Toxicological Information, if any.

4. First-aid measures

4.1 General information:
Get medical attention if irritation occurs or if breathing becomes difficult. Remove contaminated clothing and shoes.

4.2 After inhalation
No special treatment is required.

4.3 After contact with the skin
For skin contact, immediately wipe away excess material. Use a waterless hand cleaner to remove as much of the remaining material as possible. Wash with soap and water.

4.4 After contact with the eyes
If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

4.5 After swallowing
No special treatment is required.

4.6 Advice for the physician
Treat symptomatically.
5. Fire-fighting measures

5.1 Flammable properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 93 °C (&gt; 199 °F)</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

5.2 Fire and explosion hazards:

This material will burn with a lazy smoldering flame. Under certain conditions this material may generate flammable hydrogen gas. Ignitable vapors may be released during processing or curing. Avoid contact with water or alcohols especially in the presence of acids or bases as flammable hydrogen gas will be generated.

5.3 Recommended extinguishing media:

AFFF alcohol compatible foam. Carbon dioxide. Water - Use Fine Spray or Fog. Water may be used to cool tanks and structures adjacent to the fire.

5.4 Unsuitable extinguishing media:

Do not use dry powder extinguishers on this material.

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Hazardous decomposition products: carbon dioxide, carbon monoxide, formaldehyde, silicon dioxide and incompletely burnt hydrocarbons.

5.6 Fire fighting procedures:

Full turn-out gear and Self Contained Breathing Apparatus (SCBA) should be worn when fighting large fires.

6. Accidental release measures

6.1 Precautions:

Secure the area. Obtain appropriate PPE, supplies, and equipment prior to attempting any response.

HAZWOPER PPE Level: D

6.2 Containment:

No special measures required.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

6.3 Methods for cleaning up

Scoop up large quantities after dusting surfaces with sand or Fuller's earth to prevent sticking. Sweep or scrape up the spilled material and place in an appropriate chemical waste container.

7. Handling and storage

7.1 Handling

Precautions for safe handling:

Avoid contact with eyes, skin and clothing. Avoid breathing dust/vapor/mist/gas/aerosol. Use with adequate ventilation. Keep container closed when not in use. Under certain conditions this material may generate flammable hydrogen gas. Open and handle container with care. Avoid contact with water, alcohol and similar substances. Do not mix with alkalis, strong acids, oxidizing agents.

Precautions against fire and explosion:

Do not weld, cut, or grind on empty containers. Ignitable vapors may be released during processing or curing. Product can release hydrogen.
7.2 Storage

Conditions for storage rooms and vessels:
Store in a dry and sheltered place.

Advice for storage of incompatible materials:
No restriction.

Further information for storage:
Store in a dry location to prevent exposure to water or moist air. Store in a cool, temperature regulated location. Maximum temperature allowed during storage and transportation: 50 °C (122 °F)

Temperature limit based on safety considerations.

8. Exposure controls and personal protection

8.1 Engineering controls

Ventilation:
Use with adequate ventilation.

Local exhaust:
No special ventilation required.

8.2 Associate substances with specific control parameters such as limit values

none known

Further information:
Maximum concentration at workplace recommended by producer: octamethylcyclotetrasiloxane (D4, CAS no. 556-67-2) = 10 ppm (123 mg/m3)

8.3 Personal protection equipment (PPE)

Respiratory protection:
Respiratory protection is not normally required.

Hand protection:
Any liquid-tight rubber or vinyl gloves.

Eye protection:
Safety glasses with side shields or chemical safety goggles.

Other protective clothing or equipment:
Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

8.4 General hygiene and protection measures:

Follow standard industrial hygiene practices when using this material. When handling do not eat, drink, smoke or apply cosmetics. Wash thoroughly after handling.

9. Physical and chemical properties

9.1 Appearance

Physical state / form................................................: liquid
Colour .....................................................................: blue
Odour .....................................................................: odourless

9.2 Safety parameters

<table>
<thead>
<tr>
<th>Property</th>
<th>Value:</th>
<th>Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point / melting range</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 93 °C (&gt; 199 °F)</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>1.09 g/cm³</td>
<td></td>
</tr>
</tbody>
</table>
9.3 Further information

Water solubility / miscibility: insoluble
pH-Value: not applicable
Viscosity (dynamic): 39840 mPa.s

Further information:

Percent Volatiles: 0.21 %
Corrosive to Steel or Aluminum: Not corrosive to steel or aluminum.

10. Stability and reactivity

10.1 General information:
Stable under normal conditions of use.

10.2 Conditions to avoid
Although this product is not expected to react with commonly used materials of construction and process equipment, it is advised that any rubber or plastic items such as hoses and gaskets be tested prior to large scale processing to ensure there is no degradation of performance or durability. Keep away from incompatible substances. Heat, open flames, and other sources of ignition.

10.3 Materials to avoid
This material reacts with water or alcohol in the presence of acids, bases, or other catalytic materials to release hydrogen gas. The rate of hydrogen gas formation is increased at temperatures exceeding 90 °F. Reacts with: Bases (alkali or caustic materials). Strong acids. Metal based catalysts. Ammonia and other amines.

10.4 Hazardous decomposition products
Releases flammable hydrogen gas. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

10.5 Further information:
Hazardous polymerization cannot occur.

11. Toxicological information

11.1 Information on toxicological effects
The toxicity information listed below is based on the components of the material.

11.1.1 Acute toxicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.2 Skin corrosion/irritation
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.3 Serious eye damage / eye irritation
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.4 Respiratory or skin sensitization
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.5 Germ cell mutagenicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.
11.1 Carcinogenicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1 Reproductive toxicity
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.8 Specific target organ toxicity (single exposure)
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.9 Specific target organ toxicity (repeated exposure)
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.10 Aspiration hazard
Assessment:
Based on the physical-chemical properties of the product no aspiration hazard must be expected.

11.1.11 Further toxicological information
Toxicity to reproduction/fertility: Impurity: In a two generation reproductive study via inhalation with OMCTS/D4 rats, decreased mean live litter size and prolonged labor (dystocia) were observed at the 500 ppm and 700 ppm exposure levels. The relevance of these effects in humans cannot be determined at this time. Because these effects are only seen at very high exposure levels, it is unlikely that industrial, commercial and/or consumer uses of products containing OMCTS/D4 would result in a significant risk to humans. Based on animal experiments there is no indication of developmental effects.

Chronic toxicity / carcinogenicity: Impurity: In a two year combined chronic toxicity and carcinogenicity inhalation study with octamethylcyclotetrasiloxane (OMCTS/D4) in rats, an increased incidence of (uterine) endometrial cell hyperplasia and endometrial adenomas were observed at the highest exposure level of 700 ppm in female rats. These same effects were not seen at the other dose levels of 10, 30, and 150 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. In a two year combined chronic toxicity and carcinogenicity inhalation study with decamethylcyclopentasiloxane (D5) in rats, an increased incidence for (uterine) endometrial tumors was observed in the highest exposure level of 160 ppm in female rats. The same effects were not seen at the other dose levels of 10 and 40 ppm. Whether or not this increase in incidence is truly related to the exposure to D5 is questionable and yet to be determined. Based on our present knowledge it is unlikely that industrial, commercial or consumer uses of products containing D5 would result in a significant risk to humans.

12. Ecological information

12.1 Toxicity
Assessment:
For the product as a whole, no test data is available. According to current knowledge adverse effects on water purification plants are not expected.

12.2 Persistence and degradability
Assessment:
Silicone content: biologically not degradable. Separation by sedimentation.

12.3 Bioaccumulative potential
Assessment:
No adverse effects expected.
12.4 Mobility in soil

Assessment:
Insoluble in water.

12.5 Other adverse effects

none known

13. Disposal considerations

13.1 Product disposal

Recommendation:
Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable governmental regulations. Material designated for disposal must be segregated from incompatible substances or materials specified in Sect. 10. If this material has been catalyzed or contaminated and is to be disposed of, precautions must be taken to provide pressure relief in the container. Do not transfer this material to a glass container or any other non-vented container which could burst or shatter as a result of increased internal pressure. Provide measures such as vented bungs to ensure pressure relief in the waste containers. State and local regulations may be more stringent than Federal regulations.

13.2 Packaging disposal

Recommendation:
Uncleaned containers should not be reused to hold another material due to the potential for reaction between residual product and incompatible materials. Uncleaned packaging should be treated with the same precautions as the material. After emptying contaminated containers may be cleansed and recycled.

14. Transport information

14.1 US DOT & CANADA TDG SURFACE

Valuation .................................................: Not regulated for transport
Corrosive to Steel or Aluminum.........: Not corrosive to steel or aluminum.

14.2 Transport by sea IMDG-Code

Valuation .................................................: Not regulated for transport

14.3 Air transport ICAO-TI/IATA-DGR

Valuation .................................................: Not regulated for transport

15. Regulatory information

15.1 U.S. Federal regulations

TSCA inventory status and TSCA information:
This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

TSCA 12(b) Export Notification:
This material does not contain any TSCA 12(b) regulated chemicals.

CERCLA Regulated Chemicals:
This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:
This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:
This product does not present any SARA 311/312 hazards.

SARA 313 Chemicals:
This material does not contain any SARA 313 chemicals above de minimus levels.
HAPS (Hazardous Air Pollutants):

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
<th>Upper limit wt. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1345-16-0</td>
<td>Cobalt aluminumoxide spinels</td>
<td>0.09</td>
</tr>
</tbody>
</table>

15.2 U.S. State regulations

California Proposition 65 Carcinogens:
1345-16-0 Cobalt aluminumoxide spinels

California Proposition 65 Reproductive Toxins:
This material does not contain any chemicals known to the State of California to cause reproductive effects.

Massachusetts Substance List:
This material contains no listed components.

New Jersey Right-to-Know Hazardous Substance List:
This material contains no listed components.

Pennsylvania Right-to-Know Hazardous Substance List:
This material contains no listed components.

15.3 Canadian regulations

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 Hazard Classes:
D2A

DSL Status:
This material or its components are listed on the Canadian Domestic Substances List.

Non-DSL Chemicals:
This material does not contain any non-DSL chemicals.

Canadian Ingredient Disclosure List:
This material contains no listed components.

15.4 Other international regulations

Details of international registration status
Listed on or in accordance with the following inventories:
- TSCA - USA
- DSL - Canada
- AICS - Australia
- IECSC - China
- ECL - Korea
- EINECS - Europe
- ENCS - Japan
- PICCS - Philippines

16. Other information

16.1 Additional information:

This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user’s responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This MSDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.
All deliveries are subject to the WACKER SILICONES Health Care Policy, which is available at www.wacker.com.

16.2 Glossary of Terms:

- ACGIH - American Conference of Governmental Industrial Hygienists
- DOT - Department of Transportation
- hPa - Hectopascals
- mPa*s - Milli Pascal-Seconds
- OSHA - Occupational Safety and Health Administration
- PEL - Permissible Exposure Limit
- ppm - Parts per Million
- SARA - Superfund Amendments and Reauthorization Act
- STEL - Short Term Exposure Limit
- TSCA - Toxic Substances Control Act
- TWA - Time Weighted Average
- WHMIS - Canadian Workplace Hazardous Materials Identification System

Flash point determination methods ........................................................................

<table>
<thead>
<tr>
<th>Common name</th>
<th>Flash point determination methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tagliabue (Tag) closed cup</td>
<td>ASTM D56................................</td>
</tr>
<tr>
<td>Cleveland open cup</td>
<td>ASTM D92, DIN 51376, ISO 2592</td>
</tr>
<tr>
<td>Pensky-Martens closed cup</td>
<td>ASTM D93, DIN 51758, ISO 2719</td>
</tr>
<tr>
<td>Setaflash or Rapid closed cup</td>
<td>ASTM D3278, DIN 55680, ISO 3679</td>
</tr>
<tr>
<td>Abel-Pensky closed cup</td>
<td>DIN 51755................................</td>
</tr>
</tbody>
</table>

16.3 Conversion table:

- Pressure: ................................: 1 hPa * 0.75 = 1 mm Hg = 1 torr; 1 bar = 1000 hPa
- Viscosity: ..............................: 1 mPa*s = 1 centipoise (cP)