SECTION 1: Identification

1.1. Identification

Product name: GELEST® GEL F065
Product code: PP1-F065
Product form: Mixture
Physical state: Liquid
Synonyms: GELEST FLUOROSILICONE GEL F065; POLY(DIMETHYLSILOXANES), VINYL MODIFIED WITH CROSSLINKER
Chemical family: ORGANOSILOXANE

1.2. Recommended use and restrictions on use

Recommended use: Chemical intermediate

1.3. Supplier

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) Identification

2.1. Classification of the substance or mixture

GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl terminated (35-45% trifluoropropylmethylosiloxane)-dimethylsiloxane copolymer</td>
<td>(CAS No.) 68951-98-4</td>
<td>&gt; 60</td>
<td>Not classified</td>
</tr>
<tr>
<td>Methylhydrosiloxane-dimethylsiloxane copolymer, trimethylsiloxane terminated</td>
<td>(CAS No.) 68037-59-2</td>
<td>&lt; 25</td>
<td>Not classified</td>
</tr>
<tr>
<td>Vinyl modified Q silica resin</td>
<td>(CAS No.) 68584-83-8</td>
<td>&lt; 5</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)
Symptoms/effects after inhalation: No information available.
Symptoms/effects after skin contact: No information available.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: No information available.

4.3. Immediate medical attention and special treatment, if necessary
No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media
Unsuitable extinguishing media: None known.

5.2. Specific hazards arising from the chemical
Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters
Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Wear protective equipment as described in Section 8.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Use only in well ventilated areas.
Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities
Storage area: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Appropriate engineering controls
Appropriate engineering controls: Provide local exhaust or general room ventilation.
8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles. Contact lenses should not be worn

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid, Viscous.</td>
</tr>
<tr>
<td>Color</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>&lt; -60 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 10 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.38 - 1.39</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 2 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>1800 - 2400 cSt @ 23°C</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable in sealed containers under dry inert atmosphere.

10.3. Possibility of hazardous reactions
No additional information available
10.4. **Conditions to avoid**
Heat. Open flame. Sparks.

10.5. **Incompatible materials**

10.6. **Hazardous decomposition products**

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
| Symptoms/effects after inhalation | No information available.
| Symptoms/effects after skin contact | No information available.
| Symptoms/effects after eye contact | May cause eye irritation.
| Symptoms/effects after ingestion | No information available.

### SECTION 12: Ecological information

#### 12.1. Toxicity
No additional information available

#### 12.2. Persistence and degradability
No additional information available

#### 12.3. Bioaccumulative potential
No additional information available

#### 12.4. Mobility in soil
No additional information available

#### 12.5. Other adverse effects
Effect on the ozone layer : No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewage disposal recommendations</td>
<td>Do not dispose of waste into sewer.</td>
</tr>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Incinerate. Dispose in a safe manner in accordance with local/national regulations.</td>
</tr>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

### SECTION 14: Transport information

#### 14.1. UN number
Not regulated for transport.

#### 14.2. UN proper shipping name
Not applicable

#### 14.3. Additional information

<table>
<thead>
<tr>
<th>Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other information</td>
<td>No supplementary information available.</td>
</tr>
</tbody>
</table>

**Transport by sea**
No additional information available
SECTION 15: Regulatory information

15.1. US Federal regulations

- **Vinyl terminated (35-45% trifluoropropylmethylsiloxane)-dimethylsiloxane copolymer (68951-98-4)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

- **Vinyl modified Q silica resin (68584-83-8)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

- **Methylhydrosiloxane-dimethylsiloxane copolymer, trimethylsiloxane terminated (68037-59-2)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

**CANADA**

- **Vinyl terminated (35-45% trifluoropropylmethylsiloxane)-dimethylsiloxane copolymer (68951-98-4)**
  - Listed on the Canadian NDSL (Non-Domestic Substances List)

- **Vinyl modified Q silica resin (68584-83-8)**
  - Listed on the Canadian DSL (Domestic Substances List)

- **Methylhydrosiloxane-dimethylsiloxane copolymer, trimethylsiloxane terminated (68037-59-2)**
  - Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**

- **Vinyl modified Q silica resin (68584-83-8)**
  - Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**

- **Vinyl terminated (35-45% trifluoropropylmethylsiloxane)-dimethylsiloxane copolymer (68951-98-4)**
  - Listed on the AICS (Australian Inventory of Chemical Substances)
  - Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
  - Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
  - Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

- **Vinyl modified Q silica resin (68584-83-8)**
  - Listed on the AICS (Australian Inventory of Chemical Substances)
  - Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
  - Listed on the Korean ECL (Existing Chemicals List)
  - Listed on NZIoC (New Zealand Inventory of Chemicals)
  - Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

- **Methylhydrosiloxane-dimethylsiloxane copolymer, trimethylsiloxane terminated (68037-59-2)**
  - Listed on the AICS (Australian Inventory of Chemical Substances)
  - Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
  - Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
  - Listed on the Korean ECL (Existing Chemicals List)
  - Listed on NZIoC (New Zealand Inventory of Chemicals)
  - Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
  - Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

- **California Proposition 65** - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

**Abbreviations and acronyms**

- Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.
Hazard Rating

Health: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIb)

Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 04/28/2016 Revision date: 03/05/2019 Version: 1.1

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Gelest GEL Series

Clear Specialty Silicone Gel Elastomers

Features: Gels are solids with fluid characteristics. They provide mechanical protection and dampening with good cohesion, high instantaneous deformation and good resilience with a wide range of chemical resistance and refractive index control.

Applications:
- **optical component coating** - coupling media and elastomeric seals.
- **shock absorption** - provide a property range extending from vibration dampening to sound absorption.
- **electrical devices** - provide low stress protection to delicate components.

### Gelest Gel P065 2-Part Silicone Gel

**Description**
Gel P065 is a temporarily deformable material with excellent low-temperature properties and a refractive index of 1.43. It performs as a dielectric gel from 115° to 235°C.

**Gel Properties**
- **Color**: clear
- **Refractive Index**: 1.430
- **Penetration**: 60-80mm
- **Specific Gravity**: 0.99
- **Dielectric Constant**: 2.8

**Uncured Properties**
- **Form**: liquid
- **Viscosity (initial mix)**: 700-800 cSt

**Processing**
Gel P065 is a 2-part addition cure system. It is comprised of “A” and “B” parts which are mixed in a 1:1 ratio. After thoroughly mixing 1 part “A” to 1 part “B”, allow mix to de-air. Pot life is 3-4 hours. Pour or syringe around part or into cavity. Cure at 115-120°C for 30-60 minutes or at room temperature for 48 hours. If the gel is too firm (low penetration) increase the ratio of A to B to 1.1:1, 1.2:1 etc.

**Caution: Avoid contact with skin and eyes**

**Shelf life: 12 months when stored below 25°C in sealed containers.**

**Standard Packaging**
- PP2-P065 Gelest Gel P065
  - 100g/$65.00
  - 1kg/$390.00

### Gelest Gel F065 1-Part Silicone Gel

**Description**
Gel F065 is a temporarily deformable material with fluorosilicone properties, providing fuel resistant properties and a low refractive index. The one part addition cure system is technically achieved by incorporating a fugitive inhibitor to the catalyzed mix.

**Gel Properties**
- **Color**: clear
- **Refractive Index**: 1.384
- **Penetration**: 60-80mm
- **Specific Gravity**: 1.27

**Uncured Properties**
- **Form**: liquid
- **Viscosity**: 1200-1500 cSt

**Processing**
Gel F065 is a 1-part addition cure system. Pour or syringe around part or into cavity. Cure at 100-150°C for 20-30 minutes. If the gel is too firm (low penetration), FMV-4031 fluorosilicone polymer can be added at 5-20% levels prior to cure.

**Caution: Avoid contact with skin and eyes**

**Shelf life: 6 months when stored below <0°C in sealed containers.**

**Standard Packaging**
- PP1-F065 Gelest Gel F065
  - 100g/$160.00