SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form: Substance
Physical state: Liquid
Substance name: VINYLPHENYLMETHYL TERMINATED (30-40% PHENYLMETHYLSILOXANE)-VINYLPHENYLSILOXANE COPOLYMER
Product code: PVV-3522
Synonyms: SILICONE RESIN; SILOXANE, PHENYLMETHYL, PHENYL VINYL; SILOXANES AND SILICONES, METHYL PHENYL, PHENYL VINYL, [(METHYLPHENYLVINYL)OXY] TERMINATED

Chemical family: ORGANOSILOXANE
REACH authorisation exemptions: Exempted from REACH registration

1.2. Relevant identified uses of the substance or mixture and uses advised against
1.2.1. Relevant identified uses
Use of the substance/mixture: Chemical intermediate

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet
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

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
No labelling applicable

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Substance type: Polymer
Name: VINYLPHENYL METHYL TERMINATED (30-40% PHENYLMETHYLSILOXANE)-VINYLPHENYLSILOXANE COPOLYMER
VINYLPHENYL METHYL TERMINATED (30-40% PHENYL METHYLSILOXANE)-VINYLPHENYL SILOXANE COPOLYMER

Safety Data Sheet

VINYLPHENYL SILOXANE COPOLYMER

CAS-No.: 68037-82-1

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenylmethylsiloxane-phenylvinylsiloxane, vinylphenylmethyl terminated</td>
<td>(CAS-No.) 68037-82-1</td>
<td>&gt; 95</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

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 person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of water/....

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, both acute and delayed
Symptoms/effects after inhalation: No information available.
Symptoms/effects after skin contact: May cause skin irritation.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.3. Advice for firefighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

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 vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper 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
Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. 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 vapour and mist. Spillage of this material may create a slippery condition for foot or vehicle traffic.
Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed.
Incompatible materials: Strong oxidizers.
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Appropriate engineering controls:
Provide local exhaust or general room ventilation.
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
Physical state: Liquid
Appearance: Clear liquid. Viscous.
Molecular mass: 800 - 1500 g/mol
Colour: No data available
Odour: No data available
Odour threshold: No data available
Refractive index: 1.53
pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: No data available
Freezing point: < 0 °C
Boiling point: > 205 °C
Flash point: > 180 °C
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
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Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Relative density</td>
<td>1.1</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 3 %</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>80 - 150 cSt</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>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
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</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.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
Heat. Open flame. Sparks.

10.5. Incompatible materials
Strong oxidizers.

10.6. Hazardous decomposition products
(at temperatures >250°C): Organic acid vapors. Silicon dioxide. Traces of formaldehyde and benzene have been observed during the oxidative thermal decomposition of similar products at elevated temperatures (>150°C).

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified

Phenylmethysiloxane-phenylvinylsiloxane, vinylphenylmethyl terminated (68037-82-1)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
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</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
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</table>

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/effects after inhalation: No information available.
Symptoms/effects after skin contact: May cause skin irritation.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: Not classified

12.2. Persistence and degradability
No additional information available
VINYLPHENYLMETHYL TERMINATED (30-40% PHENYLMETHYLSILOXANE)-VINYLPHENYLSILOXANE COPOLYMER

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12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
No additional information available

**SECTION 13: Disposal considerations**

<table>
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<tr>
<th>13.1. Waste treatment methods</th>
</tr>
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<tbody>
<tr>
<td>Product/Packaging disposal recommendations</td>
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<tr>
<td>Ecology - waste materials</td>
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</table>

**SECTION 14: Transport information**

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<tr>
<th>14.1. UN number</th>
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<table>
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<td>UN-No. (IMDG) : Not applicable</td>
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<td>UN-No. (IATA) : Not applicable</td>
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<td>UN-No. (RID) : Not applicable</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>14.2. UN proper shipping name</th>
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</thead>
<tbody>
<tr>
<td>Proper Shipping Name (ADR) : Not applicable</td>
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<tr>
<td>Proper Shipping Name (IMDG) : Not applicable</td>
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<td>Proper Shipping Name (ADN) : Not applicable</td>
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<tr>
<td>Proper Shipping Name (RID) : Not applicable</td>
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<table>
<thead>
<tr>
<th>14.3. Transport hazard class(es)</th>
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</thead>
<tbody>
<tr>
<td>ADR Transport hazard class(es) (ADR) : Not applicable</td>
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<tr>
<td>IMDG Transport hazard class(es) (IMDG) : Not applicable</td>
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<tr>
<td>IATA Transport hazard class(es) (IATA) : Not applicable</td>
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<tr>
<td>ADN Transport hazard class(es) (ADN) : Not applicable</td>
</tr>
<tr>
<td>RID Transport hazard class(es) (RID) : Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.4. Packing group</th>
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</thead>
<tbody>
<tr>
<td>Packing group (ADR) : Not applicable</td>
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<tr>
<td>Packing group (IMDG) : Not applicable</td>
</tr>
<tr>
<td>Packing group (IATA) : Not applicable</td>
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<td>Packing group (ADN) : Not applicable</td>
</tr>
<tr>
<td>Packing group (RID) : Not applicable</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>14.5. Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment : No</td>
</tr>
<tr>
<td>Marine pollutant : No</td>
</tr>
<tr>
<td>Other information : No supplementary information available</td>
</tr>
</tbody>
</table>
VINYLPHENYLMETHYL TERMINATED (30-40% PHENYLMETHYLISILOXANE)-VINYLPHENYLSILOXANE COPOLYMER
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14.6. Special precautions for user

- Overland transport
  No data available
- Transport by sea
  No data available
- Air transport
  No data available
- Inland waterway transport
  No data available
- Rail transport
  No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
VINYLPHENYLMETHYL TERMINATED (30-40% PHENYLMETHYLISILOXANE)-VINYLPHENYLSILOXANE COPOLYMER is not on the REACH Candidate List
VINYLPHENYLMETHYL TERMINATED (30-40% PHENYLMETHYLISILOXANE)-VINYLPHENYLSILOXANE COPOLYMER is not on the REACH Annex XIV List
VINYLPHENYLMETHYL TERMINATED (30-40% PHENYLMETHYLISILOXANE)-VINYLPHENYLSILOXANE COPOLYMER is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles : < 3 %

15.1.2. National regulations

Germany
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Abbreviations and acronyms:
VINYLPHENYLMETHYL TERMINATED (30-40% PHENYLMETHYLSILOXANE)-VINYLPHENYLSILOXANE COPOLYMER

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| 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 |
| Other information: Prepared by safety and environmental affairs. |

SDS EU (REACH Annex II) - Custom

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