Vertasil® TM-L01 is a naturally derived commercial multifunctional hybrid fluid that offers improved solubility and sensory experience when compared to cyclosiloxanes.

**Vertasil® TM-L01 Benefits**

- Non Volatile, Environmentally Friendly
- Contains a Natural Component
- Improved Sensory Experience
- Reduces Tack & Greasiness
- Soft & Silky After Feel
- Improves Spreadability
- Fast Adsorption on Skin
- Light & Dry Skin Feel
- Cleansing Properties
- Non-Sensitizing

**Vertasil® TM-L01 Application**

**Alternative to D₅ in These Products:**

- Tanning Oils
- Foundations
- Color Cosmetics
- Men’s Grooming Products
- Bath & Cleaning Products
- Creams and Lotions
- Hair Care Products
- Personal Hygiene Wipes
- Solid Sticks

**Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>TM-L01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Refractive Index</td>
<td>1.426</td>
</tr>
<tr>
<td>Organic Compatibility</td>
<td>Yes</td>
</tr>
<tr>
<td>Viscosity (cSt)</td>
<td>4-5</td>
</tr>
<tr>
<td>Volatility</td>
<td>Slight</td>
</tr>
<tr>
<td>Flash Point °C</td>
<td>&gt;65</td>
</tr>
<tr>
<td>Boiling Point °C</td>
<td>295</td>
</tr>
</tbody>
</table>

Vertasil® TM-L01

Gelest, Inc.
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Morrisville, PA 19067
(215) 547-1015
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SOLUBILITY
Vertasil® TM-L01 has improved solubility characteristics over cyclopentasiloxane, permitting greater compatibility with common raw materials including natural oils and waxes, hydrocarbons, esters and sunscreens.

<table>
<thead>
<tr>
<th>Solubility</th>
<th>TM-L01</th>
<th>D_5</th>
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</thead>
<tbody>
<tr>
<td>Hydrogenated Polydecane</td>
<td>Soluble</td>
<td>Partial Soluble</td>
</tr>
<tr>
<td>Octyldodecyl Stearate</td>
<td>Soluble</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Triisostearyl Citrate</td>
<td>Soluble</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Natural Waxes</td>
<td>Soluble Hot</td>
<td>Partial Soluble</td>
</tr>
<tr>
<td>Lanolin Oil</td>
<td>Soluble</td>
<td>Soluble Hot</td>
</tr>
<tr>
<td>Octinoxate</td>
<td>Soluble</td>
<td>Insoluble</td>
</tr>
</tbody>
</table>

CLEANSING PROPERTIES
The gentle cleansing properties of Vertasil® TM-L01 are due to the insertion of limonene onto an emollient silicone. This combination offers the formulator an additional benefit in bath, cleansing products, and wipes.

Cleansing Milk with Vertasil® TM-L01
Formula LF2-068

**Phase A**
- Deionized Water q.s.
- Acrylate Copolymer 0.20
- Actives q.s.
- Propanediol 1.0

**Phase B**
Vertasil® TM-L01 10.0
- Isopropyl Myristate 5.00
- Polylglyceryl-3 Oleate 2.00
- Polysorbate 80 0.50
- Tocopherol 0.50

**Phase C**
- Red 40 q.s.
- Preservative q.s.
- Fragrance 0.50

Volatility Comparison

<table>
<thead>
<tr>
<th>% Remaining</th>
<th>100</th>
<th>99</th>
<th>98</th>
<th>97</th>
<th>96</th>
<th>95</th>
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</thead>
<tbody>
<tr>
<td>TM-L01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caprylyl Methicone</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Compatibility Comparison

- Dimethicone (50 cSt) + mineral oil + TM-L01
- Dimethicone (50 cSt) + mineral oil
- Dimethicone (50 cSt) + mineral oil + C8 methicone