Siluron®
Ultrapurified silicone oils for intraocular use

new!

Siluron® XTRA
ultrapurified silicone oil for intraocular use (sterile)

Geuder®
Precision made in Germany

Leading in purity and variety
The innovative silicone oils with the special molecular design.

High resistance to emulsification
Short injection time
Exceptional long-term tolerance
Excellent chemical purity

Due to their special molecular structure, the Siluron® Xtra and Siluron® 2000 have, compared to the standard silicone oils, in vitro a high emulsification resistance. Both innovative silicone oils consist of a mixture of ultra-long molecular chains having a viscosity in the range of 2,500,000 mPas and of short molecular chains with a viscosity in the range of 1,000 mPas.

Thanks to this special molecular design, Siluron® Xtra and Siluron® 2000 can modify their viscous properties depending on the permanent high shear forces, such as they appear in the eye due to its constant movement: the greater the applied shear force is, the more viscous behaves the silicone oil, i.e. the more resistant it is to emulsification. By contrast, the viscosity of the conventional oils decreases continuously as a result of permanently acting external forces, which causes a higher tendency for emulsification.

The new generation of silicone oils – Siluron® 2000 and Siluron® Xtra – is characterized by its special property of a significantly higher emulsification resistance. This is based on an intelligent mixture of different long chains of molecules and the resulting dynamic viscosity. The good injectability in cases of small incisions is a further advantage of innovative silicone oils.

The proven standard silicone oil tamponades.

Exceptional long-term tolerance
Excellent chemical purity

Siluron® 1000 vial 10 ml, sterile
Siluron® 1000 syringe 10 ml, sterile
Siluron® 5000 vial 10 ml, sterile
Siluron® 5000 syringe 10 ml, sterile

Standard silicone oils also available as vial

The proven standard silicone oil tamponade
The proven standard silicone oil long-term tamponade
Overview of Properties

Physicochemical properties of Siluron® oils

<table>
<thead>
<tr>
<th>Property</th>
<th>Siluron® 1000</th>
<th>Siluron® 5000</th>
<th>Siluron® 2000</th>
<th>Siluron® XTRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (g/cm³) 25 °C</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
</tr>
<tr>
<td>Viscosity [mPas] 25 °C</td>
<td>900 - 1200</td>
<td>4800 - 5500</td>
<td>2000 - 2400</td>
<td>4,100 - 4,800</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.404</td>
<td>1.404</td>
<td>1.404</td>
<td>1.404</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>non miscible</td>
<td>non miscible</td>
<td>non miscible</td>
<td>non miscible</td>
</tr>
<tr>
<td>Composition [w%]</td>
<td>100% Polydimethylsiloxan</td>
<td>100% Polydimethylsiloxan</td>
<td>95% Siluron, 1,000 + 5% 2.5 Mio. mPas</td>
<td>90% Siluron, 1,000 + 10% 2.5 Mio. mPas</td>
</tr>
<tr>
<td>Elasticity (Je) [Pas]</td>
<td>2 x 10⁻⁶</td>
<td>1 x 10⁻⁶</td>
<td>6.5 x 10⁻⁴</td>
<td>1.4 x 10⁻²</td>
</tr>
<tr>
<td>Shear viscosity (at 8.37 s⁻¹, 37 °C) [mPas]</td>
<td>931</td>
<td>4,303</td>
<td>1,800</td>
<td>4,377</td>
</tr>
<tr>
<td>Volatile components (200 °C, 24 h [%])</td>
<td>≤ 0.2%</td>
<td>≤ 0.2%</td>
<td>≤ 0.2%</td>
<td>≤ 0.2%</td>
</tr>
</tbody>
</table>

Comparison of emulsification resistance


Comparison of injection time 5.5 bar injection pressure, 20 gauge injection cannula


Comparison of emulsification rate


Comparison of emulsion resistance

The perfect accessories for Siluron

G-34497
Single-use cannula
to inject silicone oil
20 Gauge / 0.9 mm x 8 mm
5 pcs. per box, sterile

G-34498
Single-use cannula
to inject silicone oil
23 Gauge / 0.6 mm x 8 mm
5 pcs. per box, sterile

G-28766
Single-use oil injection system
to inject silicone oil pneumatically,
with protective cover for glass syringe, pressure tube fits
MEGATRON S3 / S4 HPS, sterile

G-31891
Single-use syringe
Luer-Lock, 10 ml, sterile

Adapter to connect G-28766 silicone oil injection systems
G-28791 for Geuder Megatron,
ALCON Accurus, AMO Gemini
G-28792 for Örtli systems
G-28793 for Bausch & Lomb Millennium
G-28794 Luer-Lock female
G-28795 Luer-Lock male
G-28796 for DORC Associate

G-32696
Single-use pressure tube
for injection of viscous fluid,
Luer-Lock female / male
10 pcs. per box, sterile

Stopper for viscous fluid aspiration
G-33060 with tube connection
for disposable syringe 5 ml
G-33065 with tube connection
for disposable syringe 10 ml
G-33066 with tube connection
for disposable syringe 20 ml

G-33032
Hoerauf spreading forceps
for silicone oil removal

G-26230
Sclera spreading forceps
for silicone oil removal

Manufacturing of silicone oils:
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