Siluron®
Ultrapurified silicone oils for intraocular use

Leading in purity and variety

Geuder
Precision made in Germany

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

Innovative molecular design for a new generation of silicone oils

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.


Siluron® 2000
Syringe G-80740 Siluron® 2000 10 ml, sterile

Siluron® XTRA
Syringe G-80750 Siluron® Xtra 10 ml, sterile
High resistance to emulsification
Short injection time
Exceptional long-term tolerance
Excellent chemical purity

The premium silicone oil
with the customized
extensional viscosity

The premium silicone oil
with the Xtra portion elasticity
Siluron® 1000 | Siluron® 5000

The proven standard silicone oil tamponades

Siluron® 1000
Vial G-80710 Siluron® 1000 10 ml, sterile
Syringe G-80720 Siluron® 1000 10 ml, sterile

Siluron® 5000
Vial G-80810 Siluron® 5000 10 ml, sterile
Syringe G-80820 Siluron® 5000 10 ml, sterile
Exceptional long-term tolerance
Excellent chemical purity
## 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>4100 - 4800</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 % Poly-dimethylsiloxan (PDMS)</td>
<td>95% Siluron® 1000 + 5% PDMS (2.5 Mio. mPas)</td>
<td>90 % Siluron® 1000 + 10% PDMS (2.5 Mio. mPas)</td>
<td></td>
</tr>
<tr>
<td>Elasticity (Je0) [Pas]</td>
<td>2 x 10⁻⁵</td>
<td>1 x 10⁻⁵</td>
<td>6.5 x 10⁻⁴</td>
<td>1.4 x 10⁻³</td>
</tr>
<tr>
<td>Shear viscosity (at 8,37 s⁻¹, 37 °C) [mPas]</td>
<td>931</td>
<td>4303</td>
<td>1800</td>
<td>4377</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 rate

![Comparison of emulsification rate](image-url)

Comparison of emulsification resistance

![Graph showing emulsification resistance comparison for Siluron® 1000, Siluron® 5000, Siluron® 2000, and Siluron® XTRA.]

Source: Wong et. al

Comparison of injection time

5.5 bar injection pressure, 20 gauge injection cannula

![Graph showing injection time comparison for Siluron® 1000, Siluron® 5000, Siluron® 2000, and Siluron® XTRA.]

The perfect accessories for Siluron

**Single-use cannula**
G-34497 to inject silicone oil, 20 Gauge / 0.9 x 8 mm, 10 pcs. per box, sterile
G-34498 to inject silicone oil, 23 Gauge / 0.6 x 8 mm, 10 pcs. per box, sterile

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

**Adapter to connect G-28766 silicone oil injection systems**
G-28791 for GEUDER megaTRON, ALCON®, AMO GEMINI® / WHITESTAR Signature®
G-28792 for Örtlí® systems
G-28793 for Bausch & Lomb
G-28794 Luer-Lock female
G-28795 Luer-Lock male
G-28796 for DORC Associate / EVA

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

**Hoerauf spreading forceps**
G-33032 for silicone oil removal

**Sclera spreading forceps**
G-26230 for silicone oil removal

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Fluoron GmbH reserves the right to make changes to compositions in response to recent developments. Fluoron GmbH and GEUDER AG do not assume liability for the accuracy of given statements. Regarding product availability in the single countries please contact your distributor or GEUDER AG.

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