



# Product Information

GC-LineroP-CS-E  
2024  
1st January 2024

## Regeneration of GC Liners

**You replace your liners on a regular basis to avoid adsorption of the sample; but what to do with the replaced liners then?**

**Send us your contaminated liners: We clean and deactivate them!  
... and what exactly do we do?**

At first, we clean the liners, including removing all remaining deposition on the inner surface mechanically. Then the liners are washed and dried. After that, the cleaned liners are deactivated with the well established *Sil*-, the modified (phenyl methyl) *PM-Sil*-, or the high quality *INNO-Sil*<sup>®</sup> procedure. To avoid adsorption points, liners are deactivated after inserting the glass wool. After a gentle secondary cleaning and conditioning, the liners are ready for direct use.



*Please note: This procedure is also applicable to Siltek<sup>®</sup>-and Sky<sup>®</sup>-Liners.*

**Standard- and *INNO-Sil*<sup>®</sup> deactivation can be applied to all types of glass surfaces. CS offers both procedures for GC liners, glass wool and glass vials.**

*INNO-Sil*<sup>®</sup> is a premium deactivation procedure. It provides **highest inertness of the glass surface** and avoids adsorption also with sensitive analytes like **e.g. pesticides, amines, steroids, and phenolic compounds.**



P/N	Description	€/ea at a purchase quantity of:		
		1-9 pcs. -01	10-19 pcs. -10	from 20 pcs. -20
*Appendix →				
1005031	<b>Liner Regeneration <i>Sil</i> Plus</b> Cleaning – <i>Sil</i> Deactivation – Conditioning			
1005036	<b>Liner-Regeneration <i>PM-Sil</i> Plus</b> Cleaning – <i>PM-Sil</i> Deactivation – Conditioning			Please find prices in our current catalogue or in our web shop
1005032	<b>Liner Regeneration <i>INNO-Sil</i><sup>®</sup> Plus</b> Cleaning – <i>INNO-Sil</i> <sup>®</sup> Deactivation – Conditioning			
1005034	<b>Liner Regeneration GW <i>Sil</i> Plus</b> Cleaning – Inserting <i>Sil</i> Glass Wool – <i>Sil</i> Deactivation – Conditioning			
1005037	<b>Liner-Regeneration GW <i>PM-Sil</i> Plus</b> Cleaning – Inserting <i>Sil</i> Glass Wool – <i>PM-Sil</i> Deactivation – Conditioning			
1005035	<b>Liner Regeneration GW <i>INNO-Sil</i><sup>®</sup> Plus</b> Cleaning – Inserting <i>INNO-Sil</i> <sup>®</sup> Glass Wool – <i>INNO-Sil</i> <sup>®</sup> Deactivation – Conditioning			

**In case of extreme contamination** of the liners, additional costs may arise based on additional non-standard efforts needed for cleaning. If required, these costs will be added and announced in our order confirmation.

For the **insertion of silanized glass wool in liners with special liner design** (e. g. small Double Gooseneck), additional costs may arise based on additional non-standard efforts. If required, these costs will be added and announced in our order confirmation.

On request, we will fill **liners with packing materials or carbofrits of your choice.**

Please ask for an individual offer.

**We assume no liability for liner breakage during shipment.**



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## Regeneration of GC Liners – Order Form 01/2024

Address (Stamp) : Cust. Code (if available): \_\_\_\_\_

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P/N	Description
1005031	<b>Liner Regeneration <i>Sil</i> Plus</b> Cleaning – <i>Sil</i> Deactivation – Conditioning
1005036	<b>Liner Regeneration <i>Phenylmethyl-Sil</i> Plus</b> Cleaning – <i>PM-Sil</i> Deactivation – Conditioning
1005032	<b>Liner Regeneration <i>INNO-Sil</i>® Plus</b> Cleaning – <i>INNO-Sil</i> ® Deactivation – Conditioning
1005034	<b>Liner Regeneration <i>GW Sil</i> Plus</b> Cleaning – <i>Sil</i> Deactivation – Insertion of <i>Sil</i> Glass Wool – Conditioning
1005037	<b>Liner Regeneration <i>GW Phenylmethyl-Sil</i> Plus</b> Cleaning – <i>PM-Sil</i> Deactivation – Insertion of <i>PM-Sil</i> Glass Wool – Conditioning
1005035	<b>Liner Regeneration <i>GW INNO-Sil</i>® Plus</b> Cleaning – <i>INNO-Sil</i> ® Deactivation – Insertion of <i>INNO-Sil</i> ® Glass Wool – Conditioning

**Purchase Order: We assume no liability for liner breakage during shipment !**

	P/N	Order:	Received:
<b>Liner Regeneration <i>Sil</i> Plus</b>	1005031	Pcs: _____	Pcs: _____
<b>Liner Regeneration <i>Phenylmethyl-Sil</i> Plus</b>	1005036	Pcs: _____	Pcs: _____
<b>Liner Regeneration <i>INNO-Sil</i>® Plus</b>	1005032	Pcs: _____	Pcs: _____
<b>Liner Regeneration <i>GW Sil</i> Plus</b>	1005034	Pcs: _____	Pcs: _____
<b>Liner Regeneration <i>GW Phenylmethyl-Sil</i> Plus</b>	1005037	Pcs: _____	Pcs: _____
<b>Liner Regeneration <i>GW INNO-Sil</i>® Plus</b>	1005035	Pcs: _____	Pcs: _____
Insertion of:			
Packing Material: _____	1005021	Pcs: _____	Pcs: _____
<i>Sil</i> Glass Wool for Special Liner Geometry	1005022	Pcs: _____	Pcs: _____
<i>PM-Sil</i> GW for Special Liner Geometry	1005022-P	Pcs: _____	Pcs: _____
<i>INNO-Sil</i> ® GW for Special Liner Geometry	1005022-A	Pcs: _____	Pcs: _____

Sketch for insertion of glass wool or packing material (if necessary):

Received: (to be filled out by CS!) 1) ... pcs. liner missing 2) ... pcs. liner broken 3) ... pcs. liner non-regenerable



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Visit our **Online Shop** at: www.cs-chromatographie.de