# **Liner Packing Materials & Accessories**



#### **Deactivated Wool**

Further improving our proprietary deactivation process, we make this deactivated wool more inert than our traditional fused silica wool, yet it is as flexible as our traditional borosilicate glass wool.

Description	qty.	cat.#
Deactivated Wool	10 grams	24324

#### **Base-Deactivated Wool**

Ideal for amines and other basic compounds.

Description	qty.	cat.#	
Base-Deactivated Wool	10 grams	20999	

## tech tip

#### Why Use Deactivated Wool for a Liner Packing?

- · Ensure uniform vaporization in split or splitless liners.
- · Prolong column life by trapping septum particles.
- · Recommended for autosamplers with fast injection rates.



#### Mini Wool Puller/Inserter

Insert and remove wool plugs easily. Order a spare pack so you'll always have one available.





Description	qty.	cat.#	
Mini Wool Puller/Inserter	2-pk.	20114	



## **Inlet Liner Packing Tool**

- · Position wool reproducibly every time.
- · Accurate to a specific, measured depth.



Loosen the nut on the side of the tool and adjust the gauge to the manufacturer's recommended depth.



Place a plug of loosely bound wool at the top of the inlet liner.



Insert the liner packing tool into the liner until the tool bottoms out. Remove the tool. The wool is positioned correctly in the liner and the liner is ready for use.

Description	qty.	cat.#
Inlet Liner Packing Tool	ea.	20339



**Sue Benes** GC Accessories Product Marketing Manager

### **Prepacked Inlet Liners**

Let Restek do the work! Just add the appropriate suffix to the liner catalog number.

qty.	Wool	FS Beads	CarboFrit <sup>™</sup> †	
ea.	-200.1	-201.1	-209.1	
5-pk.	-200.5	-201.5	-209.5	
25-pk.	-200.25	-201.25	-209.25	

†CarboFrit™ inserts require a neck greater than 2mm.

# tech tip

#### Injector Maintenance

Approximately ninety percent of "bad" chromatography is traceable to problems in the injection port. These problems include contaminated carrier gas, incorrect injector flows, active or dirty sites on inlet seals and liners, improper use of wool, leaks, backflash, discrimination, incorrect injector temperature, poor column installation, and use of the wrong injection technique. To minimize injection port problems, set up a routine maintenance schedule and be sure to investigate the injector first when troubleshooting.





# Liner Packing Materials & Accessories

## **CarboFrit™ Inlet Liner Packing Material**

- · Highly inert.
- · Extends analytical column lifetime.
- · Enhances reproducibility of split and splitless injection.
- Uniform pore size and consistent packing density guarantee consistent flow through the liner.
- Easy to install in any liner with an ID >3.5mm when using puller-inserter tool listed below.\*

Add the corresponding suffix number to the liner catalog number.

Description	suffix	
each	-209.1	addl. cost
5-pk.	-209.5	addl. cost
25-pk.	-209.25	addl. cost





#### **Replacement CarboFrit™ Inserts**

Description	qty.	cat. #	
Frits for liner ID ≤4mm	10-pk.	20295	
Frits for liner ID >4mm	10-pk.	20294	

### CarboFrit™ Puller/Inserter Tool

- Hook end for removing CarboFrit<sup>™</sup> inserts.
- Bent end (90°) for inserting CarboFrit<sup>™</sup> inserts.

Description	qty.	cat.#	
CarboFrit™ Puller/Inserter Tool	ea.	21642	



## a **plus 1** story

"Restek sent us some carbon material (CarboFrit™ packing) with the suggestion to test it as liner packing. Initially, I didn't even want to try it because carbon is usually highly retentive and catalytically active. As we nevertheless gave it a chance, we were highly surprised...it exhibited low retentive power and good inertness."

> excerpt from: Sample Evaporation in Hot GC Injectors Dr. Konrad Grob, The Restek Advantage, Winter 1996.

## **Deactivated Fused Silica Beads**

- · Increase sample vaporization surface and minimize splitter discrimination to improve quantitation of compounds having dissimilar boiling points.
- Trap nonvolatile or inorganic residue to prevent column inlet contamination.
- Deactivated, heat-treated, and tested to ensure complete inertness.

Description	Mesh	qty.	cat.#
Deactivated Fused Silica Reads	60-80	25 grams	20701



### **Inlet Liner Removal Tool**

- Easily remove liner from injector—no more burned fingers.
- Made from high-temperature silicone.
- · Won't chip or crack the liner.

Description	qty.	cat.#	
Inlet Liner Removal Tool	3-pk.	20181	



No more burned



#### Use of Packings with Splitless Liners

We recommend using an injection port liner with wool or CarboFrit™ packing when making splitless injections with an autosampler. If there is no packing material in the liner, the solvent droplets act like water on a hot iron: they bounce around until vaporized (Leidenfrost phenomenon). Because autosamplers make rapid injections, samples can be incompletely vaporized, leading to nonreproducible peak response and tailing. You can prevent this by using wool or CarboFrit<sup>TM</sup> packing material in the splitless liner, to provide a surface for the solvent droplets to "sit" on until the heat from the injector vaporizes them.





