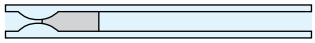
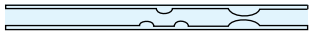
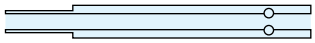
Deactivated Injection Liners

best value

Deactivated Injection Liners

Description and Length x o.d.	Diagram	5/pk Part No.	25/pk Part No.
*Injection Liners for Agilent Instruments**			
Cup Splitter, 78.5 x 6.3mm		**4827**	—
Split/Splitless with Deactivated Quartz Wool, 78.5 x 6.3mm o.d., 4mm i.d.		**4924**	**4928**
Splitless, 78.5 x 6.3mm o.d., 4mm i.d.		**4934**	**4936**
Quartz Splitless, 78.5 x 6.0mm, 2mm i.d.		**4963**	—
Recessed Gooseneck with Deactivated Quartz Wool, 78.5 x 6.3mm, 4mm i.d.		**4960**	**4961**
Recessed Gooseneck, 78.5 x 6.3mm, 2mm i.d.		**4938**	—
Direct, 78.5 x 6.3mm, 1.5mm i.d.		**4968**	—
Injection Liners for Varian® Instruments			
Splitter with Deactivated Quartz Wool, 1075/1077, 72 x 6.3mm, 4mm i.d.		**4971**	—
Baffle Splitter, 1075/1077, 72 x 6.3mm, 4mm i.d.		**4978**	—
Splitless 1075/1077, 74 x 6.3mm, 2mm i.d.		**4981**	—
0.8mm SPI 1093/1094, 54 x 4.6mm		**4984**	—
0.5mm SPI 1093/1094, 54 x 4.6mm		**4987**	**4988**
Injection Liners for PerkinElmer® Instruments			
Split/Splitless Autosystem, 92 x 5.8mm, 4mm i.d.		**4798**	**4800**
Injection Liners for Shimadzu® Instruments			
Split 17A with Deactivated Quartz Wool, 95.5 x 5.0mm, 3mm i.d.		**4750**	—
Splitless 17A, 95.5 x 5.0mm, 3mm i.d.		**4756**	—

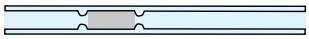
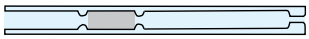
related products

Don't forget septa!

See pages 289–292 for a complete selection of septa.

Deactivated SGE FocusLiners

Deactivated SGE FocusLiners

Description and Length x o.d.	Diagram	5/Pk Part No.	25/Pk Part No.
*for Agilent Instruments**			
FocusLiner, 78.5 x 6.3 x 4mm i.d.		**85474**	**85480**
Tapered FocusLiner, 78.5 x 6.3 x 4mm i.d.		**85481**	**85574**
for Varian® Injector Models 1078/1079			
FocusLiner, 54 x 5 x 3.4mm i.d.		**85437**	—
Tapered FocusLiner, 54 x 5 x 3.4mm i.d.		**85635**	—
for Shimadzu® 17A			
FocusLiner, 95 x 5 x 3.4mm i.d.		**85476**	—
Tapered FocusLiner, 95 x 5 x 3.4mm i.d.		**85483**	—
for Shimadzu® 14/15A/16			
Tapered FocusLiner, 99 x 5 x 3.4mm i.d.		**85630**	—
for PerkinElmer® Autosystem			
FocusLiner, 86.2 x 4 x 2mm i.d.		**8618809**	—
FocusLiner, 92 x 6.2 x 4mm i.d.		**85478**	—
Tapered FocusLiner, 92 x 6.2 x 4mm i.d.		**85482**	—
for ThermoQuest™ Model 8000/TRACE			
FocusLiner, 105 x 8 x 5mm i.d.		**85631**	—

*Also compatible with Varian® model CP-1177 Split/Splitless injection port.

technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)
Email: contact.alltech@grace.com
Online: www.discoverysciences.com

GC O-rings


4639

- Thermally stable
- No bleed
- Suitable for GC/MS

Graphite O-rings may replace the Viton® or silicone O-rings normally used to seal the Agilent 5890 Split and Splitless injection liners. Splitless liners have an internal diameter of 6.5mm and split liners have an internal diameter of 6.35mm.

Specifications

Property	Graphite	Silicone	Viton®
Max. Temp.:	450°C	230°C	200°C
Chem. Rest.:	Good	Good	Superb
Durability:	Superb	Moderate	Good
Bleed:	None	Medium	Low
Color:	Black	Red	Black

O-rings

Size	Qty.	Part No.
Graphite GC O-rings (450°C Limit)		
1/4" (6.35mm i.d.)	10	**7176**
Silicone O-rings (230°C Limit)		
1/8"	100	**7020**
3/16"	100	**7021**
1/4"	100	**7022**
Viton® O-rings (200°C Limit)		
1/8"	100	**7017**
3/16"	100	**7018**
1/4"	100	**7019**

related products

Don't forget septa!

See pages 289–292 for a complete selection of septa.

Injector Supplies for Agilent 5890/6890 GCs

Inlet Seals for Agilent 5890/6890 GCs are available either stainless steel (similar to Agilent part no. **18740-20880**) or gold plated (similar to Agilent part no. **18740-20885**). Washers are included with the inlet seals.


6650

The Reducing Nut for Agilent 5890/6890 GCs is made from stainless steel and is similar to Agilent part no. **18740-20800**.

Injector Supplies for Agilent 5890/6890 GCs

Description	Qty.	Part No.
Inlet Seal, stainless steel (0.8mm hole)	1	**15146**
	10	**151461**
	25	**151462**
Inlet Seal, gold plated (0.8mm hole)	1	**15147**
	10	**151471**
	25	**151472**
Reducing Nut Replacement for Agilent 5890/6890	1	**15145**
Washers, stainless steel (0.375" o.d.)	10	**15148**
MSD Source Nut, brass	1	**15104**

Accessories for Agilent and Varian® Capillary Systems


6651

Agilent nuts are available in both standard and “deep well” versions, with either standard wrench flats or knurled for easy wrench-free fingertight connections. The deep well nuts have 2.4mm deep ferrule wells to accommodate standard capillary ferrules, and the standard type has a 1.65mm deep ferrule well for Agilent-type capillary ferrules.

Accessories for Agilent and Varian®

Description	Qty.	Part No.
Capillary Nuts		
Capillary Nuts for Varian®	2	**154740**
Capillary Nuts for Agilent	2	**154780**
Wrench-Free Capillary Nuts for Agilent	2	**154785**
Deep Well Capillary Nuts for Agilent	2	**154781**
Wrench-Free Deep Well for Agilent	2	**154782**
Graphite Ferrules for Agilent		
Graphite Ferrules, 0.5mm Hole*	10	**1547901**
Graphite Ferrules, 1.0mm Hole**	10	**1548001**
Wrench		
5/16" x 1/4" Open-End Wrench	ea	**1998**

*For 0.25 and 0.32mm i.d. Capillary Column.
**For 0.45 and 0.53mm i.d. Capillary Column.

Septa Introduction

How to Select a Septum for Your Application

With so many septa to choose from, choosing a septum for your application can be a confusing task. There are a number of criteria you need to consider when selecting a septum.

Make and Model of Gas Chromatograph

This will determine what size of septum you need. Grace carries a full range of septum sizes to fit most gas chromatographs.

Performance

A high-performance, low-bleed septum is desirable so that septa bleed does not interfere with the chromatography of your sample. Keep in mind that all septa bleed to some extent. The amount of bleed visible to the detector is affected by several factors which include:

- The composition and pretreatment of the septum material
- The sensitivity setting of the detector amplifier
- The type of detector
- The injection port setting
- Isothermal or temperature programming
- The type of injection (direct, splitless, split, etc.)

Choose a high-performance septum such as ThermoRed or XLB septa to minimize septa bleed.

Injection Port Temperature

The temperature of the septum never reaches the injection port temperature setting. The center of the injector heated zone, where the sample is deposited, is regulated to correspond to the injector port setting. Be sure to select a septum with a maximum temperature that exceeds your injection port temperature.

Penetration/Resealing Qualities

Ideally, you want a septum that is soft and easily penetrated by a syringe needle and has excellent resealing properties. This will prevent you from bending syringe needles and coring of the septum to give you longer septum life. Excellent resealing properties will prevent leaks that might adversely affect your chromatography or damage your analytical column.

4610

Septa Specifications

Actual Size Drawing	Measurement	Chromatograph
	1/4" (6mm)	Shimadzu*, SRI*
	3/8" (9.5mm)	Antek, Finnigan 9100, 9600, Gow-Mac, Agilent 5700, 5880 & 5900, IBM, Packard 427-433, Pye-Unicam (early models), Varian (except capillary inj.), Tracor 550, 560
	7/16" (11mm)	Carle, Agilent 5890,6850,6890. P-E Sigma, 900, 990, 3920, 8300, 8400, 8500 Autosys, Varian (capillary injector), SPI, Varian 1078/1079
	1/2" (12.5mm)	Fisons/Carlo Erba, Finnigan 9500, Agilent 5750 and earlier models, Packard 409-421, Tracor 220, 222, 540
	21/32" (17mm)	Fisons/Carlo Erba 8000 Series, CE TRACE GC

*Use cylindrical plug septa, see page 291.

Septa Selection Guide

Product	Max. Temp.	Color	Durometer*	Low Bleed
ThermoRed	300°C	Red	50–55	Excellent
XLB	350°C	Green	50–55	Excellent
HT-X High Performance	350°C	Blue	50–60	Excellent
General Purpose Blue	250°C	Blue	40–45	Good
Cylindrical Half-Hole	250°C	Blue	50–55	Very Good
Cylindrical Three-Layer	200°C	Red	50–55	Excellent
Three-Layer	300°C	Red/ White	50–55	Good
Four-Layer	225°C	Red/ White	50–55	Good
Microsep® PTFE-lined	250°C	Off-White	25–35	Good
Microsep® Low-Bleed PTFE-lined	250°C	Yellow/ Off-White	25–35	Very Good
High-Temperature Ultra Low-Bleed	350°C	Red	50	Excellent

*Durometer—Hardness of the silicone material. The lower the number, the softer the material.

technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)
Email: contact.alltech@grace.com
Online: www.discoverysciences.com

Septa

General Purpose Blue Septa

- Maximum temperature of 250°C (300°C for short periods)
- Lifetime of up to 150 injections
- Suitable for most GC analysis


4603

General Purpose Blue Septa

Size (o.d.)	Qty.	Part No.
1/4" (6mm)	100	**6512**
3/8" (9.5mm)	100	**6514**
7/16" (11mm)	100	**6518**
1/2" (12.5mm)	100	**6520**
12" x 12" Sheet	ea	**6528**

XLB Septa

- Maximum temperature to 350°C
- Extremely low bleed
- Superior resealing properties
- Soft, easily penetrated by syringe needle


4607

XLB Septa

Size (o.d.)	Qty.	Part No.
1/4" (6mm)	50	**15427**
3/8" (9.5mm)	50	**15428**
7/16" (11mm)	50	**15429**
1/2" (12.5mm)	50	**15430**
21/32" (17mm)	50	**15039**

ThermoRed Septa

- Maximum temperature of 300°C
- Packed in glass jars under strict QC standards to protect from contaminants


4608

ThermoRed Septa

Size (o.d.)	Qty.	Part No.
11/32" (9mm)	25	**15129**
3/8" (9.5mm)	25	**15131**
7/16" (11mm)	25	**15132**
1/2" (12.5mm)	25	**15141**
21/32" (17mm)	25	**15133**
Plug Type (For Shimadzu® and SRI)	25	**15134**

HT-X High-Performance Septa

- Maximum temperature of 350°C
- Long injection life—over 200 injections


4604

HT-X High-Performance Septa

Size (o.d.)	Qty.	Part No.
3/8" (9.5mm)	50	**15492**
7/16" (11mm)	50	**15493**
21/32" (17mm)	50	**154941**
1/2" (12.5mm)	50	**15494**
12" x 12" Sheet	ea	**15496**

Microsep® Low-Bleed PTFE-Lined Septa

- Maximum temperature of 250ºC
- Off-white silicone septa with yellow PTFE backing


4591

Microsep® Low-Bleed PTFE-Lined Septa

Size (o.d.)	Qty.	Part No.
3/8" (9.5mm)	2 x 50	**78001**
7/16" (11mm)	2 x 50	**78011**
1/2" (12.5mm)	2 x 50	**78041**

Cylindrical Septa

- 8mm long x 6mm o.d. with half-hole


4597

Half-Hole Septa Shown Here

The standard half-hole septa is red silicone with an upper temperature limit of 225°C. 3-layer septa features the shielding and reinforcing properties of PTFE. The plug septa are low bleed, have an upper temperature limit of 350°C, and are compatible with Shimadzu® and SRI.

Cylindrical Septa

Size (o.d.)	Qty.	Part No.
Cylindrical Half-Hole Septa		
1/4" (6mm)	4 x 25	**6526**
3-Layer 1/4" (6mm)	50	**9602**

Merlin Microseal® Septum

- Lasts for thousands of injections
- No instrument modification needed
- Installation as easy as changing a standard septum
- High-pressure model allows operation up to 100psig

5070

The Merlin Microseal® septum is a long-life replacement for the septum and septum nut on the capillary inlet system of an Agilent GC. It incorporates two sequential seals to provide a much longer period of use between seal changes. Use the Merlin Microseal® septum with the 7673 Autosampler to allow many more samples to be run unattended while reducing the risk of lost or compromised data caused by septum leaks or fragmentation. It also allows for easier manual injections.

The Microseal® septum lasts longest when a syringe needle with a truncated cone shaped tip is used. It may also be used with the standard 0.63mm diameter (0.026", 23-gauge) needle recommended for use with the 7673 Autosampler.

Merlin Microseal® Septum*

Description	Part No.
Microseal® Septum Kits	
For Agilent GCs	
Microseal® Nut and 2 Septa	**80060**
For Varian® 1078 and 1079 GCs with SPME Injector	
Varian® Kit, Nut with Start Switch, 1 Septum and O-ring	**80031**
Replacement Parts	
For Agilent GCs	
Microseal® Septum, ea	**80063**
Microseal® High-Pressure Septum, ea	**80194**
Microseal® High-Pressure Nut, ea	**80196**
For Varian® 1078 and 1079 GCs with SPME Injector	
Microseal® High-Pressure Septum, ea	**80035**

*Regular Merlin Microseal® has a 30psig limit. High-Pressure Merlin Microseal® has a 100psig limit.

Septum Remover

90º hooked point allows for safe septum removal. Aluminum body. 8" length.


4584

Septum Remover

Description	Part No.
Septum Remover	**24030**

Septa Accessories

Septa-Out

Safely extract cylindrical septa without the danger of breaking your glass column or sampling bulb port.


4585

Septa-Out

Description	Part No.
Septa-Out	**6412**

Inlet Pressure Gauge

Insert the needle directly into the inlet of any gas chromatograph for direct pressure measurement. The small, 0.028" o.d. needle permits repeated inlet pressure checks without damage to the septum.


4588

Inlet Pressure Gauge

Description	Part No.
0–30psig	**86805**
0–60psig	**86806**
0–100psig	**86807**
0–200psig	**86808**
Replacement Needle Assembly	**18260**

Septum Needle Guide

This septum needle guide helps reduce bent syringe needles and extends septum life. With the septum needle guide you get double leak protection. A cylindrical septum acts as a double seal should your primary septum start leaking. Needle guide is self-centering to aid in on-column injection.


4583

Septum Needle Guide

Description	Part No.
Needle Guide, 7/16" x 20 Thread*	**6401**
Replacement Cylindrical Septa, 25/pk	**6524**

*Fits most injection ports including: PE-3920 and Sigma Series; HP5700, 5800, and 6900 Series (5890 and 6890).