

Septa

Molded Thermogreen® LB-2 Septa

Molded Thermogreen® LB-2 septa are manufactured from high quality, low bleed material using the same exclusive LB-2 rubber



formulation that chromatographers are accustomed to using. The difference is that molded septa, unlike traditional die-cut septa, offer easier installation and better sealing. This is because our liquid injection molding process yields septa that all conform to the same shape with crisp, clean sides.

The usable inlet temperature range of 100–350 °C is adequate for the majority of GC applications. Don't be fooled by other septa that advertise a maximum temperature of 400 °C (to make a septa with high thermal limits, one must also make it stiffer, resulting in septa that are harder to pierce and easier to core)! Our molded Thermogreen® LB-2 septa offer the perfect combination of temperature range, low bleed and easy puncturability.

The version with injection hole is for autosampler injections, manual injections and/or SPME applications. The solid disc version is for manual injections.

- Rubber formulation available exclusively as part of the Supelco® portfolio
- Strict tolerances (diameter, thickness and injection hole) due to the constant dimensions of the mold itself
- Ultra low bleed over a wide range of inlet temperatures (100–350 °C)
- No foreign substances or powders (which could contaminate the inlet) are used during manufacturing
- Fully tested for bleed and contamination
- Already conditioned, ready-to-use
- Ideal for use with low bleed GC-MS columns

Description	Pkg.	Cat. No.
9.5 mm, with injection hole	50 ea.	28331-U
	250 ea.	28332-U
9.5 mm, solid discs	50 ea.	28670-U
	250 ea.	28671-U
10 mm, with injection hole	50 ea.	28333-U
	250 ea.	28334-U
10 mm, solid discs	50 ea.	28673-U
	250 ea.	28675-U
11 mm, with injection hole	50 ea.	28336-U
	250 ea.	28338-U
11 mm, solid discs	50 ea.	28676-U
	250 ea.	28678-U
11.5 mm, with injection hole	50 ea.	29446-U
	250 ea.	29448-U
11.5 mm, solid discs	50 ea.	29449-U
	250 ea.	29451-U
17 mm, with injection hole	50 ea.	29452-U
	250 ea.	29453-U
17 mm, solid discs	50 ea.	29456-U
	250 ea.	29457-U

Thermogreen® LB-2 Septa

We test every lot of Thermogreen® LB-2 septa, to ensure low bleed and high puncture tolerance. We also condition these septa—they are ready-to-use, right from the container. Popular dimensions are listed below. Other dimensions can be found in our catalog and on our website.



- Exclusive Supelco® formulation
- Extremely low bleed over a wide range of inlet temperatures (100–350 °C)
- Already conditioned, ready-to-use

Description	Pkg.	Cat. No.
9.0 mm	50 ea.	28021-U
9.5 mm	50 ea.	20652
	250 ea.	20666
10 mm	50 ea.	20653-U
	250 ea.	23156
11 mm	50 ea.	20654
	250 ea.	23163
	1000 ea.	23164
11.5 mm	50 ea.	23154
17 mm	50 ea.	23159
Plug (for Shimadzu®)	10 ea.	20608
	50 ea.	20633

Merlin Microseal™ System Kits

The Merlin Microseal system incorporates a unique design with two sequential seals that provide long septum life. The patented design is a replacement for the standard septum and septum nut in a capillary inlet system. Popular kits are listed below. Kit components can be found in our catalog and on our website.



- Sustain many injections without leaks or septum fragments
- For use with 23 gauge blunt tipped needles
- Ideal for use with an SPME device with a 23 gauge needle
- These kits include all necessary items for initial installation

Description	Max Pressure	Cat. No.
For Agilent 5890/6890/7890 GCs	30 psi	22584
For Agilent 5890/6890/7890 GCs	100 psi	24815-U
For Varian 3400/3800 GCs with 1077/1078/1079 Injectors	100 psi	24817-U
For Varian 3800 GCs with CP-1177 Injector	100 psi	22609-U

GC Accessories

Septa and Accessories

We test every lot of Thermogreen LB-2 and Thermogreen LB-1 silicone septa, to ensure low bleed and high puncture tolerance. We also condition these septa – they are ready to use, right from the container.

Thermogreen LB-2 Septa

Lowest bleed of any septum we have tested.

- Extremely low bleed over a wide range of inlet temperatures – 100°C to 350°C
- Already conditioned, ready to use
- Easier needle penetration and high puncture tolerance – ideal for autosamplers
- Rubber formulation exclusive to Supelco

DISC DIAMETER		QTY.	CAT. NO.	PRICE
mm	INCH			
5.0	3/16	50	20638	
6.0	1/4	50	20651	
9.0	11/32	50	28021-U	
9.5 ¹	3/8	50	20652	
9.5 ¹	3/8	250	20666	
9.5 ¹	3/8	1000	20677	
10.0	13/32	50	20653-U	
10.0	13/32	250	23156	
10.0	13/32	1000	23157	
11.0	7/16	50	20654	
11.0	7/16	250	23163	
11.0	7/16	1000	23164	
11.5	11/24	50	23154	
12.5	1/2	50	20660-U	
12.5	1/2	250	20678	
14.0	9/16	50	20662-U	
16.0	5/8	50	20663	
17.0	21/32	50	23159	

CYLINDRICAL, FOR SHIMADZU INSTRUMENTS

Plug Type	10	20608
Plug Type	50	20633

DRILLED, FOR SOLID PHASE MICROEXTRACTION

9.5 ¹	3/8	25	23161
9.5 ¹	3/8	50	23162-U
11.0	7/16	25	23167
11.0	7/16	50	23168

¹ We recommend a 9.5mm (3/8") septum to those who previously used the 9mm size.

Thermogreen LB-1 Septa

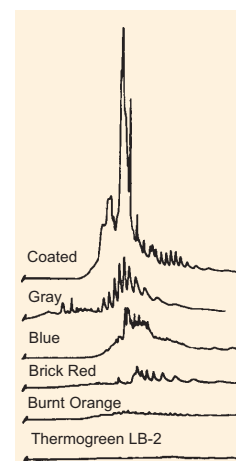
For overall dependability.

- Inlet temperature: 50°C to 300°C

DISC DIAMETER		QTY.	CAT. NO.	PRICE
mm	INCH			
9.5	3/8	50	20659-U	
10.0	13/32	50	20657-U	
11.0	7/16	50	20658	
12.5	1/2	50	20661	

CYLINDRICAL, APPROX. 6mm DIAMETER x 9mm

Thru-Hole Type	100	20667
Half-Hole Type	100	20668



93-0132

Bleed after 25 punctures
Temperature: 40°C to 250°C
Injector Set Point: 350°C

P000183

FREE MUG!



P000331

With Thermogreen LB-2 Septa

Ask for your free mug when you order any package of Thermogreen LB-2 septa.

DESCRIPTION	CAT. NO.
Free Mug	1714-U

RELATED INFORMATION:

For Low Bleed, High Temperature Septa useful application note describing criteria for selecting a septum, request the following free literature by phone or fax, or see our website.

No. Subject
T395082 Low Bleed, High Temperature GC Septa Improve Baseline Stability

Order: 1.800.325.3010 Technical Service: 1.800.359.3041 Web: www.sigma-aldrich.com/supelco

GC Accessories

Septa and Accessories

Pyrosep S-1 Septa

Inlet Temperature: 300°C to 400°C – Pyrosep S-1 septa are made from a Teflon-type elastomer conditioned at 300°C to minimize bleed. Because they are relatively hard, they must be used with a needle guide (to prevent the needle from buckling) and only at high temperatures. Our metal adapter rings offer substantial savings by enabling you to use smaller septa.

Pyrosep

GR-2

Hamilton

P000185

Pyrosep S-1 Septa

DISC DIAMETER		QTY.	CAT. NO.	PRICE
mm	INCH			
6	1/4	10	22369	
9.5	3/8	10	22370-U	

ADAPTER RINGS(PK. OF 2)

9.5mm OD x 6mm ID ¹	22338
--------------------------------	-------

¹ Use with 6mm septa, to replace 9.5mm septa.

GR-2 Septa

DISC DIAMETER		QTY.	CAT. NO.	PRICE
mm	INCH			
5.0	3/16	100	20712	
6.0	1/4	100	20442-U	
9.5	3/8	100	20405	
9.5	3/8	250	20625	
9.5	3/8	1000	20627	
10.0	13/32	100	20441	
11.0	7/16	100	20421	
12.5	1/2	100	20413	

GR-2 RUBBER SHEET STOCK

290 x 290 x 3mm	20420-U
-----------------	---------

GR-2 Septa

Inlet Temperature: 50°C to 200°C – Low cost gray silicone rubber septa for routine, isothermal use.

Hamilton Red Disc Septa

Inlet Temperature: to 200°C – A soft inner layer of silicone rubber sandwiched between hard outside layers.

Teflon-Faced Septa

Inlet Temperature: 200°C to 300°C – After the Teflon face is ruptured during injection, some bleeding will occur. Since this bleed increases as more rubber is exposed, we recommend using a needle guide to reduce the size of the punctured area.

SS-138 123 mil off-white silicone rubber / 2 mil ivory Teflon.

SS-174 123 mil off-white silicone rubber / 2 mil yellow Teflon. Improved version of the SS-138 with less bleed.

Hamilton Red Disc Septa

DISC DIAMETER		QTY.	CAT. NO.	PRICE
mm	INCH			
9.0	11/32	12	20416	
10.0	13/32	12	20417	
12.5	1/2	12	20418	

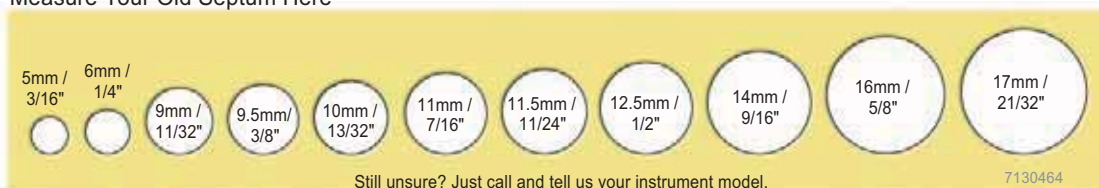
Teflon-Faced Septa

DISC DIAMETER		QTY.	CAT. NO.	PRICE
mm	INCH			
SS-138				
6.0	1/4	100	22652	
9.5	3/8	100	20459	
9.5	3/8	250	22622	
10.0	13/32	100	20465	
11.0	7/16	100	22730	
12.5	1/2	100	20460-U	
SS-174				
6.0	1/4	100	22654	
9.5	3/8	100	22656	
9.5	3/8	250	22618	
9.5	3/8	1000	22619	
10.0	13/32	100	22647	
11.0	7/16	100	22731	
12.5	1/2	100	22657	
14.0	9/16	50	22732	

Septum Sizes for Various Chromatographs

MANUFACTURER	GC MODEL	DISC DIAMETER	
		mm	INCH
Agilent/HP	5880A, 5890	11	7/16
	5700 series, 5880	9.5	3/8
	5880/90, 6890, OCI ports	5	3/16
Antek	all	9.5	3/8
Finnigan	9600	9.5	3/8
Finnigan/Tremetics	9000, 9500	12.5	1/2
GOW-MAC	all	9.5	3/8
HNU	portable GC	9.5	3/8
Perkin-Elmer	Sigma series, 900 & 990,		
	8000, Auto Sampler	11	7/16
Shimadzu	14, 15A, 16, 17A	plug	
Thermoquest	8000 series	17	21/32
Tracor	220, 222, 540	12.5	1/2
	550, 560	9.5	3/8
Varian	packed column injectors	9.5	3/8
	SPI	11	7/16
	3700/Vista, capillary injectors	11/11.5	7/16/11/24
	Saturn GC/MS	11.5	11/24
	1177	9.0	11/32

Measure Your Old Septum Here



Order: 1.800.325.3010 Technical Service: 1.800.359.3041 Web: www.sigma-aldrich.com/supelco

Gas Chromatography

SUPELCO

GC Accessories

Septa and Accessories



Septum Nuts

Consistent septum tightness, fewer bent needles, easy leak detection. The needle guide in Supelco septum nuts ensures that the needle consistently penetrates the septum in the same place, prolonging septum life. The guide also prevents the needle from striking the edge of the column or bending during insertion. The 9/16" hexagonal nut head accommodates our torque wrench for consistent, optimum tightening. Each nut is supplied with easily interchangeable 1/2" and 1" guides. Use 9.5mm septa with each nut.

The stainless steel nuts hold up under heavy use (e.g., when septa are replaced daily). We also recommend using them for reactive samples, such as chlorinated pesticides. Aluminum nuts offer economy in light use or when samples are nonreactive (i.e., when metal columns are used).

Nut N-1 fits PE-3920, 900, Sigma series, Agilent/HP-5700, other ports accepting 1/4" Swagelok nut, 7/16" threads, 20/inch.

Nut N-2 fits Varian 3700, other ports accepting 1/4" nut, 7/16" threads, 24/inch.

Use with packed columns only. Also see torque wrench.

DESCRIPTION	CAT. NO.	PRICE
SEPTUM NUT N-1		
Stainless Steel	22399	
All Aluminum	22497	
SEPTUM NUT N-2		
All Aluminum	22402	

¹ Aluminum needle guide.



Torque Wrench

Take the guesswork out of tightening a septum nut. The handle of the Supelco septum nut torque wrench slips when preset torque (8 inch-lbs.) is reached. Helps prevent leaking septa, excess bleed, and difficult septum penetration. Deepwell socket (9/16") fits over the Supelco septum nut even with a needle guide attached.

DESCRIPTION	CAT. NO.	PRICE
Torque Wrench	22661	

20855



Injection Port Rethreader

Die, enclosed in a knurled brass jacket, restores worn injection port threads, ensuring a good septum nut seal.

DESCRIPTION	CAT. NO.	PRICE
-------------	----------	-------

For ports accepting
 1/4" Swagelok nuts¹
 1/8" Swagelok nuts²
 In Varian instruments³

20855

20856

20854

¹ 7/16", 20 threads/inch² 5/16", 20 threads/inch³ 7/16", 24 threads/inch

Needle Guide

Prolongs septum and needle life. Use with the septum holder already in your instrument. Requires a 3/16" diameter hole in the holder. If hole in your septum holder is too small, simply drill to 3/16" to insert guide.

DESCRIPTION	CAT. NO.	PRICE
-------------	----------	-------

Needle Guide

20839-U



Septum Pullers

Our hook septum puller is great for removing soft silicone septa and graphite ferrules from 1/4" Swagelok nuts. Has dozens of other uses around the lab.

The screw septum puller is perfect for removing soft silicone septa and harder high temperature septa such as the Pyrosep S-1.

DESCRIPTION	CAT. NO.	PRICE
-------------	----------	-------

Hook Septum Puller

20352

Screw Septum Puller

20353



Septum Inserter

No burned fingers – no contaminated septa! Use the Supelco Septum Inserter to install a septum in any GC injection port that uses 9.5mm - 11mm septa. Eliminates the potential for burned fingers; prevents septum contamination from finger oils or dropping on the floor.

DESCRIPTION	CAT. NO.	PRICE
-------------	----------	-------

Septum Inserter

21385-U