



**SEPTA GUIDE**..... Page 1 – Characteristics  
Page 2 – Compatibility

## Primary Characteristics of Septa Materials:

### **PTFE - Description/Uses:**

- Material which can be used alone or as the barrier material used with rubber and silicone.
- Has with superior chemical inertness qualities even against the most aggressive solvents
- Easily pierced by manual or autosampler needles but does not reseal, allowing sample loss to occur rapidly if left out in the lab environment

### **PTFE/Red Rubber - Description/Uses:**

- Material that is an economical choice for routine sample analysis
- Limited level of resealability but does show very good chemical resistance before puncture
- Not recommended for retention of sample
- Can be penetrated by manual or autosampler injection needle with ease

### **PTFE/Silicone - Description/Uses:**

- Material is of higher quality compared to PTFE/rubber
- Excellent resealing capabilities
- Highly recommended for multiple injections and sample storage
- Resistant to coring
- Best septa for most GC and HPLC applications where the cleanliness and purity of the septa is critical

### **PTFE/Silicone/PTFE - Description/Uses:**

- Material with identical qualities to PTFE/silicone with the additional PTFE barrier
- Excellent resealing capabilities
- Used for samples where time lapse between sample injection is extended
- Provides superior performance characteristics for GC and HPLC applications

### **PTFE/Silicone (Pre-Slit) - Description/Uses:**

- Material with identical qualities to the PTFE/silicone with a single or cross slit through the center of the septa
  - Provides ease of access and reduces coring on instruments with blunt needles
  - Prevents forming of a vacuum inside the vial when withdrawing large sample volume
  - Excellent chemical resistance to aggressive solvents
  - First choice for autosamplers with thin gauge needles
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## Septa Post-Injection Compatibility

<b>Poor</b>	Septa will allow sample loss and deterioration
<b>Fair</b>	Septa maintains integrity for a limited period of time with some deterioration
<b>Good</b>	Septa maintains integrity for an extended period of time minor deterioration
<b>Excellent</b>	Septa maintains integrity for high percentage of analytical sample analysis with minimal deterioration

Chemical	Rubber	Silicone	Butyl Rubber
Acids	Good	Excellent	Fair
Acids, diluted	Good	Good	Fair
Acetone	Good	Poor	Good
Alcohols	Fair	Good	Good
Benzene	Poor	Fair	Poor
Chloroform	Poor	Good	Fair
Dioxane	Fair	Good	Poor
Ethyl Acetate	Good	Excellent	Fair
Ethyl Alcohol	Excellent	Good	Fair
Halogenated Hydrocarbons	Poor	Excellent	Poor
Hexane	Poor	Good	Poor
Ketones	Excellent	Fair	Good
Methanol	Good	Excellent	Good
Pentane	Poor	Good	Poor
Sulfuric Acid	Fair	Good	Poor
Surfactants	Excellent	Excellent	Fair
Toluene	Fair	Good	Poor
Water	Excellent	Excellent	Good

This chart is a general guide for information only. It is not intended to, nor should it be used to, recommend or justify use of a particular product or a particular course of action. A variety of factors may affect the performance of a product under expected use conditions. Variable factors like temperature, pressure, chemical concentration, length of exposure, and combinations of chemical reagents should be taken into consideration to whatever extent they may be relevant and appropriate.