

Septa Guide

Septa material and combinations

Septa should be determined by the type of sample for analysis. There are 6 common types of liner manufactured in conjunction with vials that can be used inserted into crimp caps, screw caps and or snap caps.

The hardness of rubber can have influence on sealing. Another term for Durometer is Shore hardness. Shore A Durometer hardness measures the resistance of a material to indentation. The hardness gives an indication of the type of properties to expect from a material but is not always the indicator of performance.

The typical hardness for chromatography septa is Shore A 45, +/- 5, but can also be Shore A 35 +/- 5, or Shore A 50 +/- 5.

Septa used in chromatography almost always has a Fluoro-polymer material facing the sample, commonly Fluoro-polymer is PTFE

Septa Compatibility Post Injection

Poor = Post injection this septum will exhibit sample loss and deterioration

Fair = Post injection this septum will maintain integrity for a limited period of time with some deterioration

Good = Post injection this septum will maintain integrity for an extended period of time minor deterioration

Excellent = Post injection this septum will maintain integrity for high percentage of analytical sample analysis with absolute minimal deterioration

Chemical	Rubber	Silicone	Butyl Rubber	Viton
Acids	Good	Excellent	Fair	Poor
Acids, diluted	Good	Good	Fair	Poor
Acetone	Good	Poor	Good	Poor

Alcohols	Fair	Good	Good	-
Benzene	Poor	Fair	Poor	Good
Chloroform	Poor	Good	Fair	Good
Dioxane	Fair	Good	Poor	Poor
Ethyl Acetate	Good	Excellent	Fair	Poor
Ethyl Alcohol	Excellent	Good	Fair	-
Halogenated Hydrocarbons	Poor	Excellent	Poor	-
Hexane	Poor	Good	Poor	-
Ketones	Excellent	Fair	Good	-
Methanol	Good	Excellent	Good	Poor
Pentane	Poor	Good	Poor	-
Sulphuric Acid	Fair	Good	Poor	Good
Surfactants	Excellent	Excellent	Fair	-
Toluene	Fair	Good	Poor	Excellent
Water	Excellent	Excellent	Good	Good

