

What is PEEKsil™ tubing?

PEEKsil™ is polymer-sheathed fused silica tubing, available in outside diameters of 1/32 inch or 1/16 inch, and now in 0.36mm. The sheathing polymer is polyether ether ketone (PEEK) that is mechanically strong and has ideal characteristics for sealing with conventional metal or polymer ferrule systems. PEEKsil may be used as a direct replacement for conventional stainless steel as well as a replacement for PEEK tubing used in liquid chromatography systems. The new 0.36mm OD material allows it to be used directly in place of 0.36mm OD fused silica tubing.

Advantage of PEEKsil

•Robust Tubing

The PEEK polymer exterior coating and the fused silica combination (**Figure 1**) makes PEEKsil very robust. PEEKsil is therefore capable of withstanding high pressures, making it ideal for capillary LC and LC-MS applications. All PEEKsil tubing is pressure rated to 10000psi.

•Smooth Wall Surface

The fused silica internal wall of PEEKsil provides an exceptionally smooth surface, free of imperfections, which ensures excellent flow characteristics. Stainless steel, in contrast, has a very rough and pitted inner wall surface, which has several detrimental effects on the performance of a liquid chromatography system.

- PEEKsil's smooth wall allows lower carry over or cross contamination between samples that can lead to improved reproducibility.
- The smooth wall of PEEKsil, particularly for smaller inside diameter LC column systems, gives lower band broadening and therefore higher efficiency and resolution.
- Small inside diameters of stainless steel tubing are prone to blockage. The smooth wall of fused silica tubing means that it is far less likely to block.

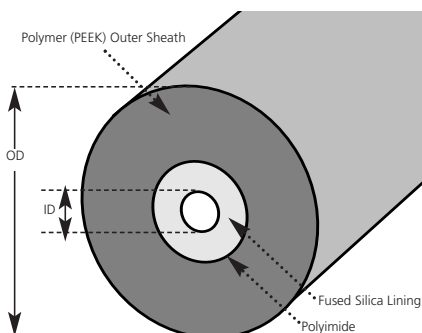


FIGURE 1. PEEKsil tubing cross-section

•Solvent Compatibility

PEEKsil is compatible with most organic solvents, even at elevated temperatures, because the solvent is only in contact with the fused silica. PEEKsil is resistant to strong acids and has an effective pH range of 0-10. PEEKsil is not compatible with hydrofluoric acid.

•Inertness

Fused silica is renowned for its extremely low absorption characteristics, and is deactivated for critical chromatography applications.

•Precision of Inside Diameter

The inside diameter of fused silica tubing can be produced far more precisely and with a greater range of sizes than is available with stainless steel (see **Table 1**).

•Zero Metal Contact in LC

The sample and mobile phase do not come into contact with metal in PEEKsil tubing.

•Ease of Connection

PEEKsil is inherently straight, but is very flexible, which makes connection between columns, detectors and injectors easier than with more rigid stainless steel tubing.

•Precision Finished Ends

SGE uses a proprietary process in cutting PEEKsil that ensures every end is cut squarely and has a smooth flat surface finish. This enables optimal low dead volume connections to be made.

•Applications of PEEKsil

PEEKsil can be used in all applications where solvents must be pumped under high or low pressures with little flow resistance or possibility of contamination. Typical uses are in LC connecting lines, sample loops and sample lines.

TABLE 1. PEEKsil ID Range.

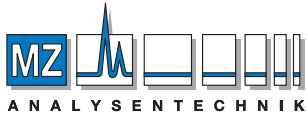
PEEKsil ID	= 25	± 1 micron
	= 50	± 3 micron
	= 75	± 3 micron
	= 100	± 3 micron
	= 150	± 5 micron
	= 175	± 5 micron
	= 200	± 5 micron
	= 300	± 5 micron
	= 530	± 10 micron

Fused Silica Lined PEEK tubing

Tubing Type	ID (mm)	Length (mm)	Pack Size	Part No.	
0.36mm OD	0.025	50	2	0624371	
		100	2	0624372	
		150	2	0624373	
		250	2	0624374	
		500	2	0624375	
	0.050	50	2	0624376	
		100	2	0624377	
		150	2	0624378	
		250	2	0624379	
		500	2	0624380	
	1/32" OD	0.025	50	2	0624241
			100	2	0624242
			150	2	0624243
			250	2	0624245
			500	2	0624249
0.050		50	2	0624261	
		100	2	0624262	
		150	2	0624263	
		250	2	0624265	
		500	2	0624269	
0.075		50	2	0624271	
		100	2	0624272	
		150	2	0624273	
		200	2	0624275	
		500	2	0624279	
0.100		50	2	0624311	
		100	2	0624312	
		150	2	0624313	
		250	2	0624315	
		500	2	0624319	
0.150		50	2	0624341	
		100	2	0624342	
		150	2	0624343	
		250	2	0624345	
		500	2	0624349	
1/16" OD		0.025	50	5	0624225
			100	5	0624226
			150	5	0624227
			200	5	0624228
			500	2	0624229
	0.050	50	5	0624251	
		100	5	0624252	
		150	5	0624254	
		200	5	0624253	
		500	2	0624250	
	0.075	50	5	0624290	
		100	5	0624291	
		150	5	0624292	
		200	5	0624293	
		500	2	0624294	
	0.100	50	5	0624301	
		100	5	0624302	
		150	5	0624304	
		200	5	0624303	
		500	2	0624300	
	0.150	50	5	0624230	
		100	5	0624231	
		150	5	0624232	
		200	5	0624233	
		500	2	0624234	
	0.175	50	5	0624351	
		100	5	0624352	
		150	5	0624354	
		200	5	0624353	
		500	2	0624350	
0.200	50	5	0624202		
	100	5	0624203		
	150	5	0624205		
	200	5	0624204		
	500	2	0624201		
0.300	50	5	0624214		
	100	5	0624215		
	150	5	0624216		
	200	5	0624217		
	500	2	0624218		
0.530	50	5	0624365		
	100	5	0624366		
	150	5	0624367		
	200	5	0624368		
	250	2	0624369		
		500	2	0624370	

Color Coded PEEKsil tubing:

- Orange 25µm
- Beige (Natural) 50µm
- Black 75µm
- Red 100µm
- Purple 150µm
- Yellow 175µm
- Blue 200µm
- Grey 300µm
- Bone White 530µm



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