Leak Free SilTite™ metal ferrules for GC & GC-MS

SilTite ferrules are a unique metal ferrule specifically designed for connecting fused silica GC columns and tubing to mass spectrometer interfaces and injectors. Once fitted, SilTite ferrules provide a continuous leak free connection without the need to re-tighten the nut after a few temperature cycles. SilTite ferrules make Graphite/Vespel® ferrules obsolete for use in GC-MS connections. Their performance and cost effectiveness also makes them ideal for connecting GC columns to injectors and atmospheric detectors.

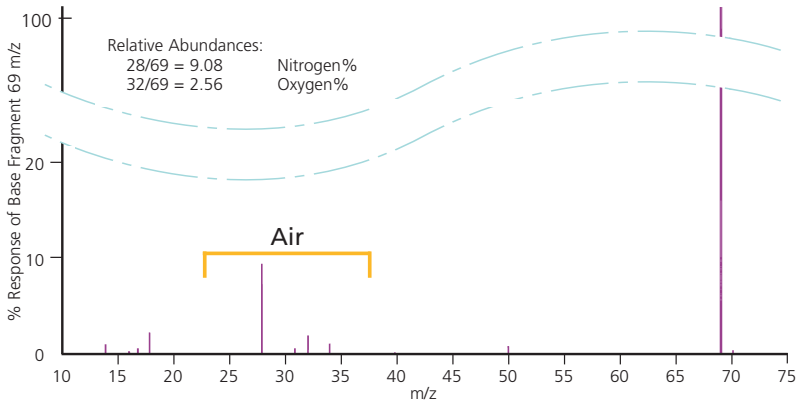


Figure 1. MS trace using a graphite Vespel ferrule after 5 temperature cycles.

Why choose SilTite ferrules?

- Eliminates leaks (Figures 1 and 2)
- Never needs re–tightening, even after temperature cycling
- Ferrule remains permanently fixed to the column but does not adhere to the SilTite nut
- No contamination from Vespel or graphite materials – 100% metal
- Ideal for high pressure applications
- Also available for injector interfaces
- >500°C maximum temperature

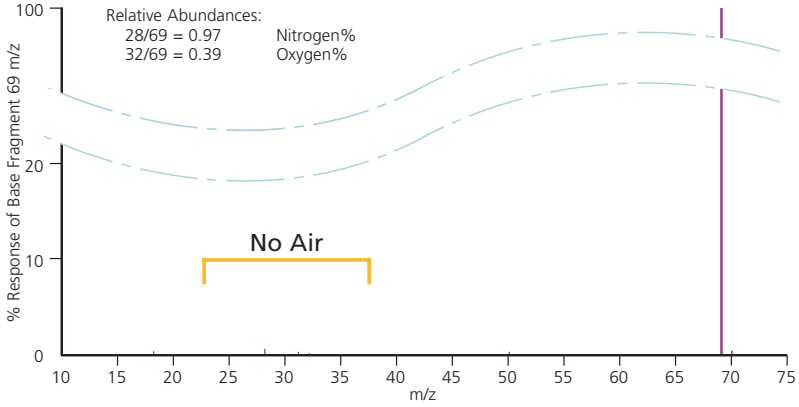


Figure 2. MS trace using a SilTite ferrule after 5 temperature cycles. (Using an MS, no leaks can be detected, even after 400 temperature cycles between 70°C and 400°C).

SGE Analytical Science

How does SilTite work?

SGE has developed a metal ferrule specifically for use with fused silica GC columns. Combining a specially designed ferrule and nut system, the SilTite ferrules must be used in conjunction with this special nut that is supplied with the ferrules.

The geometry of the nut and ferrule combination makes it possible to swage the end of the ferrule to the fused silica tubing. This creates a leak-free seal (Figure 3) that never needs re-tightening – even after 400 temperature cycles between 70°C and 400°C. Constructed from identical material, the ferrule and nut expand and contract at the same rate as the oven temperature heats up and cools down. In contrast, the Graphite/Vespel ferrules have a different rate of expansion to that of the metal nut. As the oven temperature changes, leaks may occur if the metal nut is not retightened. This allows air and water to enter into the MS, causing damage to the MS and a reduction in the quality of your analysis.

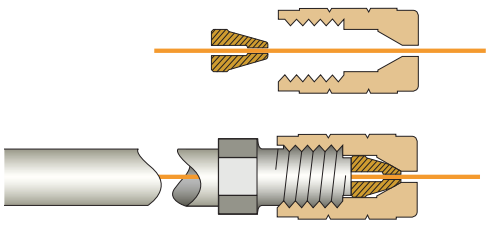
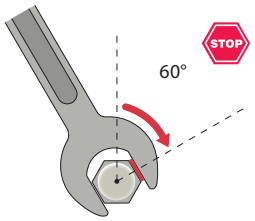


Figure 3. The SilTite ferrule fits into the specifically designed SilTite nut. This allows a perfect seal every time with the MS interface.



For easy installation gradually tighten the nut until the ferrule just begins to hold the fused silica. Then tighten a further 60°; a leak tight seal is guaranteed. When using Siltite ferrules with stainless steel tubing, the ferrule should be tightened greater than 60° (between 90 - 180°) to ensure a leak free seal.

SilTite Instrument Specific Kits

Connection	Column ID (mm)	SilTite Kit (2 nuts & 10 ferrules)	Replacement Ferrules (pk 10)	Replacement Nuts (pk 5)
Agilent				
MSD Interface	≤ 0.25	073200	073220	073224
MSD Interface	0.32	073201	073221	073224
MSD Interface	0.53	073202	073222	073224
MSD Interface	1/32"	073210	073219	073224
Injectors	≤ 0.25	073270	073220	073226
Injectors	0.32	073271	073221	073226
Injectors	0.53	073272	073222	073226
Injectors	1/32"	073273	073219	073226
Replacement base seals Pk2				073400
Replacement base seals Pk10				073401
Perkin Elmer				
MS Interface	≤ 0.25	073200	073220	073224
MS Interface	0.32	073201	073221	073224
MS Interface	0.53	073202	073222	073224
MS Interface	1/32"	073210	073219	073224
Shimadzu				
QP5000 series MS				
Jet Separator MS Interface*	≤ 0.25	073200	073220	073224
Jet Separator MS Interface*	0.32	073201	073221	073224
Jet Separator MS Interface*	0.53	073202	073222	073224
Jet Separator MS Interface*	1/32"	073210	073219	073224
Direct MS Interface*	≤ 0.25	073204	073227	073233
Direct MS Interface*	0.32	073205	073228	073233
Direct MS Interface*	0.53	073206	073229	073233
Direct MS Interface*	1/32"	073207	073235	073233
2010				
2010 MS Interface & injector	≤ 0.25	073200	073220	073224
2010 MS Interface & injector	0.32	073201	073221	073224
2010 MS Interface & injector	0.53	073202	073222	073224
Injectors				
2010 Injectors & atmospheric detectors	≤ 0.25	073350	073227	073232
2010 Injectors & atmospheric detectors	0.32	073351	073228	073232
2010 Injectors & atmospheric detectors	0.53	073352	073229	073232
ThermoFinnigan				
MS Interface	≤ 0.25	073450	073330	073230
MS Interface	0.32	073451	073331	073230
MS Interface	0.53	073452	073332	073230
MS Interface	1/32"	073453	073333	073230
Varian				
MS Interface & injector	≤ 0.25	073300	073220	073231
MS Interface & injector	0.32	073301	073221	073231
MS Interface & injector	0.53	073302	073222	073231
MS Interface & Injector	1/32"	073303	073219	073231

* Before ordering your SilTite nuts and ferrules, please ensure the correct orientation of the Shimadzu MS Interface (The jet separator has a flat interface, the direct interface has a taper.)

Other SilTite Kits

	Column ID (mm)	Replacement Ferrules (pk 10)	Replacement Nuts (pk 5)
SilTite Mini Unions			
073550	≤ 0.25	073470	073553
073551	0.32	073471	073553
073552	0.53	073472	073553
SilTite 1/16" Starter Kit			
073203	1/16"	073223	073225

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