

## CHEMINERT® 360 µm FITTINGS

### Technical Note 509

Cheminert high pressure 360 µm fittings permit direct connection (no liners required) of 360 µm OD stainless, PEEK®, fused silica, or electroformed nickel (EfNI) tubing. Consisting of a nut with snap-in ferrule, this unique one-piece fitting combines the best features of two- and one-piece fitting designs—the ferrule can rotate freely to avoid twisting the tubing as the fitting is tightened, but it can't get lost.

Because of the compact size and fine 2-56 threads, a leak-free connection that seals at pressures of up to 20,000 psi can be easily formed with the manual tool accessory. (The actual pressure limit depends on the combination of tubing and fitting material; with PEEK tubing, for example, the pressure limit is the burst strength of the tubing.)

Fittings and valves with 360 micron fitting details are shipped with the fittings screwed into the details to protect the noses on the ends of the ferrules during shipment. The red band keeps the nose of the ferrule from contacting the taper of the fitting detail; since there's no tube to support the ferrule ID, contact with the taper could collapse the ferrule.

#### INSTRUCTIONS FOR INITIAL MAKEUP

1. Remove the nuts/ferrules from the fitting details and discard the red bands.
2. Slide a nut/ferrule (hex end first) onto the tubing, exposing the tubing beyond the ferrule by at least 1 mm.
3. Screw the nut/ferrule/tube assembly into the detail two or three turns, maintaining the length of tube exposed beyond the ferrule.
4. Continue to screw in the nut/ferrule until the ferrule makes initial contact with the tubing. To determine that point of contact, as you turn the nut in small clockwise increments, grip the tubing and gently slide it in and out until you feel a very slight resistance.

**Caution: Do not pull the tubing out beyond the ferrule nose during this procedure.**

5. Push the tube in until it butts firmly into the bottom of the fitting detail.
6. Tighten the nut an additional amount as described below. Do not overtighten.

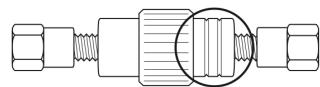
PEEK ferrule on PEEK or fused silica tubing:      1/2 turn (180°) maximum

Stainless ferrule on stainless or EfNI tubing:      1/2 turn (180°) maximum

Gold-plated ferrule on fused silica tubing:      3/8 turn (135°) maximum

**Caution: Exceeding the maximum may damage the ferrule, nut, tubing, and fitting detail.**

To remake the connection after it has been removed, simply screw the nut/ferrule/tube back into the detail until the ferrule makes contact, then tighten 1/4 turn (90°).



Grooves indicate bore size  
1 groove: 50 µm  
2 grooves: 100 µm  
no grooves: 150 µm

