

# Seal Material

## PEEK\* Seal Features & Benefits

- ▶ Memory (set resistance) exceeds metal seals 20:1  
PEEK seals successfully tested through thousands of connect/disconnect cycles while metal seals tend to fail after relatively few cycles
- ▶ PEEK exceeds chemical and corrosion resistance of nearly all metals in sub-sea applications
- ▶ Comparable performance strength to that of metal seals
- ▶ Excellent abrasion resistance to sand and dirt which would tend to damage sealing surfaces of metal seals in sub-sea conditions.
- ▶ Excellent temperature stability within a temperature range of -40°F to +480°F (-40°C to +249°C)
- ▶ PEEK strength and flexibility eliminates need for secondary elastomer back-up seals
- ▶ Unlike metal seals, PEEK seals are easily field repairable
- ▶ PEEK seals have a proven track record

*Snap-tite's sub-sea couplings utilize elastomer seals or polymer seals manufactured from PEEK. This material is used as a direct replacement for metal seals and eliminates the inherent sealing problems common to metal seals. It exceeds the chemical and corrosion resistance of nearly all of the metals currently used in sub-sea applications. PEEK has been proven by extensive use as a material for pump and valve seals for sub-sea application; chemical processing equipment and other highly corrosive fluids.*

*PEEK has excellent abrasion resistance and temperature stability which is very important for seals used in sub-sea applications. It's memory (set resistance) exceeds that of metal seals by a factor of approximately 20:1 and can tolerate greater abusive use. It's physical strength, flexibility, corrosion and abrasion resistance eliminates the need for metal seals. It has been fully tested for endurance by connecting and disconnecting under water while pressurized to 10,000 psi (690 bar) in excess of 5000 cycles without failure. Testing has been carried out in our own certified laboratory as well as in an independent laboratory and documented in both cases. PEEK seals eliminate the need for elastomer back-up seals and their inherent limitations. Because of their durability and simple design, these PEEK sealed couplings are generally field repairable without the use of special tools or extensive and costly training. Snap-tite's coupling designs are also available with other seal compounds such as Viton and nitrile. All these advantages provide the customer with a highly improved coupling for sub-sea applications.*

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