



## **Assembly Instructions for FRP Threaded Fittings**

Because of the unique fabrication methods that we use in making our FRP threaded composite pipe fittings, we achieve FRP (fiberglass reinforced plastic) threads that are exceptionally strong and tough. However, to insure trouble-free joints, we recommend that the following procedures (steps) be used when making any threaded joint or connection; where either one, or both, of the mating threads is FRP.

By design, FRP threads are made such that typically you will get one to two additional turns of thread engagement, when compared to a steel pipe thread. It is possible, especially when mating an FRP thread to a PVC threaded part, for the FRP threads to "bottom out". If such bottoming out should occur with a steel mating thread, and if too much torque is applied in tightening, you can strip or crack the FRP threads.

**STEP #1:** As the first step in making a leak-proof joint, a good quality TFE (Teflon) paste type thread sealer should be liberally applied to **both** the male and female threads of the joint. An example of an acceptable TFE paste type sealer would be John Crane's JC-30 pipe thread sealer for chemical and corrosive services. The TFE or paste sealer helps prevent damage to the FRP threads, protects and lubricates the thread surfaces, and will allow for disassembly if required in the future.

**STEP #2:** On the male threads only, apply over the top of the TFE paste sealer a Teflon pipe tape. Where the male threads are steel, we recommend three to four complete wraps of the Teflon tape over the length of the full thread engagement. Where the male threads are FRP or PVC, we would recommend five to six turns of the Teflon tape over the entire area of thread engagement. The purpose of the Teflon tape is to hold the paste in place, and to provide additional "bulk" thread sealing.

**STEP #3:** Hand tighten the threaded connection until the joint is snug. Make sure that the Teflon tape does not get pushed backwards off of the male threads. Again, make the first tightening by hand. But, give the threads a good, strong, twist to make sure that they get seated well.

**STEP #4:** Using channel locks, a strap wrench (preferred), or pipe wrench, turn the coupling or the nipple 1/4 turn, until tight. Do not over tighten. Never use channel locks or wrenches having a handle longer than 12". Never use a "cheater bar" to apply additional pressure to the FRP threaded connection.

**STEP #5:** Teflon tape and paste does have a tendency to cold flow with time and pressure. If necessary, either after putting in service or after letting the joint sit for some period of time; re-tighten the joint, turning no more than 1/4 of a turn at any tightening.

Literally tens of thousands of threaded FRP joints are successfully made every year. Following the above step by step procedures will insure a trouble-free and long life joint using threaded FRP composite fittings and adapters from Industrial Fiberglass Specialties - the industry's leader for threaded FRP fittings.