



Nipples Technical Information
Materials & Styles of Nipples

PVC, CPVC & PE Nipples

PVC/CPVC/PE Nipples furnished may be produced from extruded stock, or from molding grade PVC/CPVC compounds. Both processes provide quality products meeting ASTM requirements. Spears® thermoplastic nipples are produced in a variety of styles, several of which are illustrated below. These are referred to as Plain (no threads), TOE (Threaded One End), TBE (Threaded Both Ends), Grooved (which can be Plain x Groove, Groove x Thread, & Groove x Groove). Special varieties of Polyethylene Nipples include Cut-off, Four-In-One Cut-off and Four-In-One Cut-off Reducing.

APPLICABLE TO CLEAR AND GRAY NIPPLES



Plain x Groove



TOE (Threaded One End)



PE Riser Extension Cut-Off Nipple



Groove x Thread



Plain



PE Cut-Off Nipple



Groove x Groove



TBE (Threaded Both Ends)

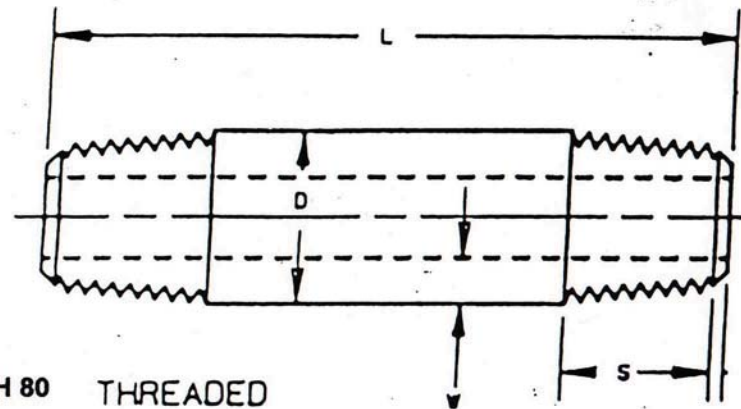


PE Four-In-One Cut-Off Nipple

Close Nipples are simply two (2) threads back to back. Short Nipples is a term commonly used to designate a slightly longer nipple that is usually the smallest length above "close." The following table shows length of Close and Short nipples:

Length of Close & Short Nipples

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"
Close	3/4	7/8	1	1-1/8	1-3/8	1-1/2	1-5/8	1-3/4	2	2-1/2	2-5/8	2-7/8	3-3/4	3-5/8	4	4-3/8
Short	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2-1/2	3	3	3-1/2	4-1/2	4-1/2	4-1/2	5



GENERAL SPECIFICATIONS
THREADED NIPPLES ALL MATERIALS - SCH 40 AND SCH 80 **THREADED**

ALL DIMENSIONS IN INCHES

NOM SIZE	D		W		S		L	
	O.D. AVG DIAM	MAX OUT OF OF ROUND	WALL THICKNESS		THD/IN	MIN THD LGT	CLOSE	SHORT
1/8	0.405	0.016	0.068	0.095	27	0.31	3/4	1-1/2
1/4	0.540	0.016	0.088	0.119	18	0.44	7/8	1-1/2
3/8	0.675	0.016	0.091	0.126	18	0.44	1	1-1/2
1/2	0.840	0.016	1.090	0.147	14	0.53	1-1/8	1-1/2
3/4	1.050	0.020	0.113	0.154	14	0.55	1-3/8	2
1	1.315	0.020	0.133	0.179	11-1/2	0.68	1-1/2	2
1-1/4	1.660	0.024	0.140	0.191	11-1/2	0.71	1-5/8	2-1/2
1-1/2	1.900	0.024	0.145	0.200	11-1/2	0.72	1-3/4	2-1/2
2	2.375	0.024	0.154	0.218	11-1/2	0.76	2	2-1/2
2-1/2	2.875	0.030	0.203	0.276	8	1.14	2-1/2	3
3	3.500	0.030	0.216	0.300	8	1.20	2-5/8	3
4	4.500	0.030	0.237	0.337	8	1.30	2-7/8	4

NOTES:
 "AVERAGE DIAMETER" DETERMINED BY AVERAGING MAX AND MIN MEASURED DIAMETERS.
 "OUT-OF-ROUNDNESS" IS THE DIFFERENCE BETWEEN MAX AND MIN MEASURED DIAMETERS.
 BASED ON ASTM D 1785 STANDARD SPECIFICATION FOR PVC PLASTIC PIPE, SCH 40, 80 AND 120.
 BASED ON ASTM D 2464 STANDARD SPECIFICATION FOR THREADED PVC PLASTIC FITTINGS SCH 80.



Which Threaded Joint Sealant to Use?

- Tape sealants are more susceptible to improper installation
- Paste sealants are more likely to contain incompatible chemicals
- Either type – Paste or Tape - must be properly used but **NEVER** use both!
- Do not use paste or tape on Gasket Sealed Head Adapters

The Problem with Using TFE Tape Sealants

TFE tape sealants require special attention on application. Failure to follow the instructions below can result in female thread breaks due to excessive tape use, difficult assembly due to insufficient tape, leaks due to failure to cover starting threads, and leaks due to incorrectly applied tape that bunches at the thread entrance. Since TFE tape is a really good lubricant, care must be taken not to over-tighten taped joints.

*If You **MUST** Use Tape Sealant, Use It Correctly!*

Wrap Tape In Direction of Threads
(clockwise for right-hand thread):

- For Head Adapters, use **ONLY** 2-3 wraps of tape and tighten to specified torque.
- For Female Adapter transition to metal pipe, use **ONLY** 5 to 5-1/2 wraps of tape.

Joint Assembly:

Tighten threaded joints 1-2 turns beyond finger tight. Avoid “backing up” the wrenched assembly. **DO NOT** over-tighten.

