



SPECIFICATIONS FOR A SPECIAL ENGINEERED (SE) PRODUCT NSF SE 14975

Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 PEX and PE-RT Tubing with Alternate Dimensions

1. Purpose:

This specification defines the product specific requirements for fitting sizes not currently covered under ASTM F2159.

2. Scope of Specification:

This specification identifies the application, reference documents, testing requirements, material requirements, product marking, and in-plant quality control testing for sulfone plastic insert fittings and copper crimp rings whose dimensions are not currently covered under ASTM F2159.

3. Application:

Products meeting the requirements of this specification are for use in potable water (PW) and radiant floor heating (RFH) applications.

4. Reference Documents:

ASTM F2159 Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing

5. Materials and Manufacture:

- 5.1 Material – In accordance with ASTM F2159 Section 5.1
- 5.1.1 Rework Material – In accordance with ASTM F2159 Section 5.1.1
- 5.2 Potable Water Requirements – In accordance with ASTM F2159 Section 5.2
- 5.3 Crimp Rings – In accordance with ASTM F2159 Section 5.3

6. Molded Part Properties

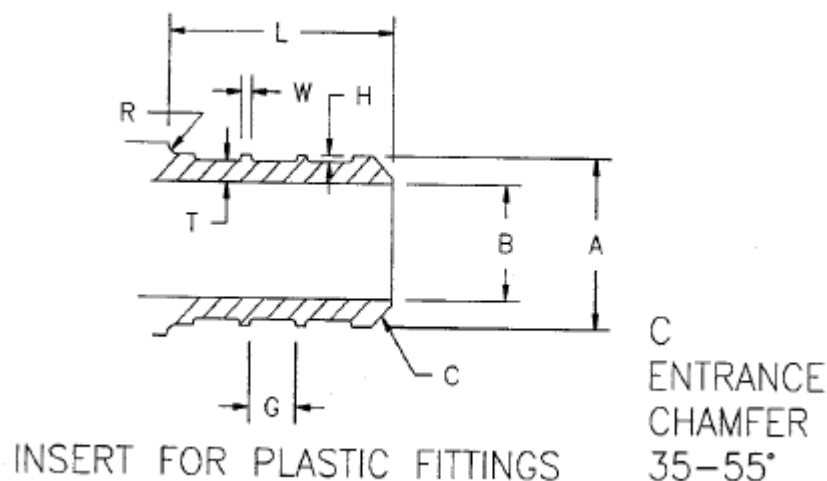
- 6.1 Insert Crush – In accordance with ASTM F2159 section 6.1
- 6.2 Splay – In accordance with ASTM F2159 section 6.2

7. Performance Requirements

- 7.1 General – In accordance with ASTM F2159 section 7.1
- 7.2 Hydrostatic Burst – In accordance with ASTM F2159 section 7.2
- 7.3 Hydrostatic Sustained Pressure Strength – In accordance with ASTM F2159 section 7.3
- 7.4 Thermocycling – In accordance with ASTM F2159 section 7.4
- 7.5 Excessive Temperature-Pressure Capability – In accordance with ASTM F2159 section 7.5

8. Dimensions

- 8.1 Dimensions and Tolerances – The dimensions and tolerances of fittings larger than 1" shall be in accordance with the following table:



SIZE	A OUTSIDE DIAMETER	B MINIMUM ID	L INSERT LENGTH	H MINIMUM RIB HEIGHT	NUMBER OF RIBS	W RIB WIDTH TYP	G GAP WIDTH TYP	T MINIMUM WALL	R MINIMUM RADIUS	MAXIMUM FLASH AND MISMATCH TOTAL ON CREST DIAMETER
1-1/4"	1.045 ± .003	0.819	1.200 + .04	0.015	3	.035- 0.040	.165- .170	0.096	0.03	0.005
1-1/2"	1.233 ± .005	0.952	1.200 + .04	0.025	3	.035- 0.040	.165- .170	0.113	0.03	0.005
2"	1.602 ± .005	1.247	1.500 + .02	0.035	3	.045 - .050	.120- .125	0.140	0.03	0.005

8.1.1 Alignment – In accordance with ASTM F2159 section 8.1.1

8.1.2 Tapered Threads – In accordance with ASTM F2159 section 8.1.2

8.1.3 Straight Threads – In accordance with ASTM F2159 section 8.1.3

9. Workmanship, Finish, and Appearance

In accordance with ASTM F2159 section 9.

10. Assembly

In accordance with ASTM F2159 section 10.

11. Test Methods

In accordance with ASTM F2159 section 11.

12. Molded Parts Properties Test Method

In accordance with ASTM F2159 section 12.

13. Product Marking:

13.1 Quality of Marking—The marking shall be applied to the fittings in such a manner that it remains legible after installation and inspection.

13.2 Content of Marking:



13.2.1 Marking on fittings shall include manufacturer's name or trademark, or some other identifying mark, material designation, and NSF® <end use> SE.

13.2.1.1 Where recessed marking is used on fittings, care shall be taken to see that in no case shall the marking cause cracks or reduce the wall thickness below the minimum specified.

13.2.2 Marking on packaging shall include manufacturer's name, fitting size, and NSF® <end use> SE.

13.2.3 Marking on crimp rings shall be marked in accordance with the requirements of Specification F1807.

8. In-plant Q.C. Requirements:

The following tests are to be performed at start-up and at the designated frequencies thereafter. These tests shall be performed in accordance with Section 7 of this document:

Test	Frequency
Burst Pressure	Annually
Dimensions	
Insert OD	weekly
Body wall thickness	weekly
Insert length	weekly
Thread gauge	24 h
Thread length ¹	See footnote
All other required insert dimensions	weekly
Excessive temperature and pressure capability	annually
Sustained pressure	annually
Thermocycling	annually
¹ Thread length is only required to be verified at the time a new tool is "qualified" or when repaired cores are made.	