Designation: F 1961 – 02a

An American National Standard

Standard Specification for Metal Mechanical Cold Flare Compression Fittings with Disc Spring for Crosslinked Polyethylene (PEX) Tubing[1,2]

This standard is issued under the fixed designation F 1961; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers metal mechanical cold flare compression fittings with integral disc spring suitable for use with cross-linked polyethelene PEX plastic tubing in ⅜, ½, ⅝, and ¾ nominal diameters. that meets the requirements of Specifications F 876 and F 877. These fittings are intended for use in 100 psi (689.5 kPa) cold and hot water distributions systems and hydronic heating systems operating at temperatures up to and including 180°F (82°C). Included are the requirements for materials, workmanship, dimensions, and markings to be used on the fittings.

1.2 *Units*—The values stated in inch-pounds units are to be regarded as the standard. The values given in parentheses are mathematical conversions to SI units which are provided for information only and are not considered standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

A 666 Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate and Flat Bar[3]

B 16 Specification for Free-Cutting Brass Rod, Bar, and Shapes for Use in Screw Machines[4]

B 140/B 140M Specification for Copper-Zinc-Lead (Leaded Red Brass or Hardware Bronze) Rod, Bar and Shapes[4]

B 283 Specification for Copper and Copper-Alloy Die Forgings (Hot Pressed)[4]

D 1600 Terminology for Abbreviated Terms Relating to Plastics[5]

D 2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings[6]

E 18 Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials[7]

F 412 Terminology Relating to Plastic Piping Systems[6]

F 876 Specification for Crosslinked Polyethylene (PEX) Tubing[6]

F 877 Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems[6]

2.2 *ASME Standards:*[8]

B1.20.1 Pipe Threads General Purpose (inch)

B16.18 Cast Copper Alloy Solder Joint Pressure Fittings

B16.22 Wrought Copper and Copper Alloy Solder Joint Pressure Fittings

2.3 *NSF Standards:*[9]

NSF 14 Plastic Piping Components and Related Materials

NSF 61 Drinking Water System Components-Health Effects

2.4 *DIN Standard:*[10]

DIN 1766.

2.5 *Other Standard:*[11]

MSS SP-104, Wrought Copper Solder Joint Pressure Fittings

[1] This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems, and is the direct responsibility of Subcommittee F17.10 on Fittings.

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[2] The cold flare compression fitting with integral disc spring is covered by a patent. Interested parties are invited to submit information regarding the identification of an alternative to this patented item to ASTM headquarters. Your comments will receive careful consideration at a meeting of F17, which you may attend.

[3] *Annual Book of ASTM Standards*, Vol 01.03.

[4] *Annual Book of ASTM Standards*, Vol 02.01.

[5] *Annual Book of ASTM Standards*, Vol 08.01.

[6] *Annual Book of ASTM Standards*, Vol 08.04.

[7] *Annual Book of ASTM Standards*, Vol 03.01.

[8] Available from American Society of Mechanical Engineers, United Engineering Center, 345 E. 47th St., New York, NY 10017.

[9] Available from National Sanitation Foundation, P.O. Box 1468, Ann Arbor, MI 48106.

[10] Available from Deutsches Institut Fur Normung eV. Burggrafenstrasse 4 Berlin 30, West Germany D-1000.

[11] Available from Manufacturer's Standardization Society of the Valve and Fittings Industry, 5203 Leesburg Pike, Suite 502, Falls Church, VA 22041.

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