

## PureFlow® PolyAlloy PEX Crimp Fittings and Crimp Rings for ViegaPEX™ and ViegaPEX™ Ultra SDR-9 Cross-linked Polyethylene (PEX)

### Scope

This product specification designates the requirements for Viega PureFlow PolyAlloy PEX Crimp fittings and black copper crimp rings to be used as connections for ViegaPEX tubing in 3/8", 1/2", 3/4" and 1" sizes. These fittings are approved for use with ASTM Standard F876 PEX tubing.

### Materials

All PolyAlloy PEX Crimp fittings are manufactured from a polysulfone/polyphenylsulfone blended polymer (Acudel). The material is listed with NSF International for potable water contact. PolyAlloy PEX Crimp fittings exhibit excellent resistance to the corrosive effects of water and are well suited for hot water applications. The black copper crimp rings are manufactured from UNS C10200 or UNS C12200 copper alloy. Rings are annealed to 35-45 Rockwell 15T scale for ease of crimping. The black coating is not a paint but a surface treatment which does not add to the dimensions of the ring.

### Marking and Certification

PolyAlloy PEX Crimp fittings are marked with the F2159 ASTM Standard and the NSF-pw mark indicating third party certification by NSF International. Rings are marked with SDR-9 and/or PEX, F1807 and manufacturer's mark. NSF conducts random on-site inspections of Viega manufacturing facilities and independently tests PureFlow PolyAlloy PEX Crimp fittings for compliance with physical, performance, and toxicological standards.

### Recommended Uses

PolyAlloy PEX Crimp fittings and black copper crimp rings are intended and recommended for use in potable water distribution systems with ViegaPEX and ViegaPEX Ultra tubing meeting the requirements of ASTM F876. Maximum design temperature and pressure ratings are 160 psi @ 73°F and 100 psi @ 180°F. For information on other hot and cold applications not listed here, consult with your Viega representative.

### Handling and Installation

PolyAlloy PEX Crimp fittings are corrosion and impact resistant. However, they are still softer than metals and must be protected from UV exposure and petroleum products which can damage them. Use of these materials in hot and cold water distribution system must be in accordance with good plumbing practices, applicable code requirements, and current installation practices available from Viega. Contact a Viega representative or the applicable code enforcement bureau for information about approvals for specific applications.

Property	ASTM Test Method	Typical Values	
		English Units	SI Units
Specific Gravity	D 792	1.28	1.28
Melt Flow, g/10 min.	D 1238	12	12
Water Absorption, % in 24 hrs.	D 570	0.3	0.3
Tensile Strength @ Yield	D 638	11,200 psi	77 MPa
Tensile Modulus (psi MPa)	D 638	387,000 psi	2.67 MPa
Tensile Elongation @ yield, %	D 638	6.7	6.7
Tensile Elongation @ break, %	D 638	50	50
Flexural Strength @ yield, % (psi, MPa)	D 790	19,500 psi	134 MPa
Flexural Modulus, (psi, MPa)	D 790	402,000 psi	2.77 GPa
Izod Impact (Notched)	D 256	2.0 ft-lb/in	150 J/m
Heat Deflection Temp. @ 264 psi (1.8 MPa)	D 648	387°F	197°C
Thermal Conductivity	C 177	2.1 Btu-in/ft <sup>2</sup> /hr/°F	0.31 W/m-°C

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## Quality Assurance

When the product is marked with the ASTM F2159 designation, it affirms that the product was manufactured, inspected, sampled and tested in accordance with these specifications and has been found to meet the specified requirements.

## Certification

### cNSF®us pw

- NSF International Performance and Health Effects (Standards 14 & 61)
- NSF certified to CSA B137.5 (Canadian Standards Association)

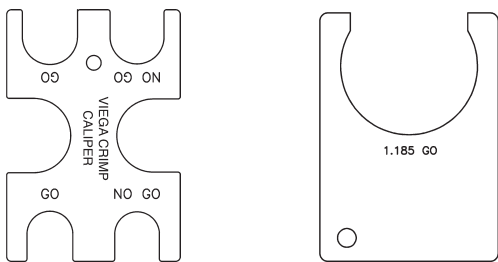
**NSF Certified to NSF-U.P. Code** - approved for Uniform Plumbing Code, listed to ASTM F2159.

## Pressure Drop Table For PolyAlloy PEX Crimp Fittings Expressed in Equivalent Length of Tubing in Feet

SIZE	COUPLING	ELBOW	TEE RUN	TEE BRANCH
1/2"	7.1	16.5	7.2	17.9
3/4"	4.8	17.4	6.6	17.7
1"	4.5	18.0	6.0	17.0

This information is based on tubing nominal flow rate. (8 fps flow velocity)

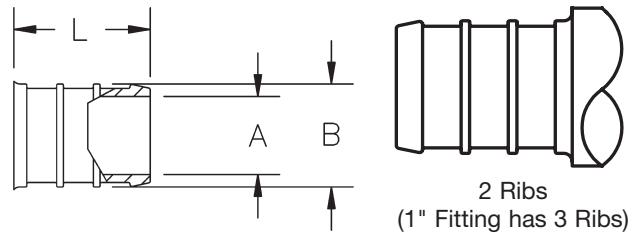
**GO/NO GO Calipers:** Viega offers GO/NO GO calipers for easy testing of the finished crimp.



## PureFlow PolyAlloy PEX Crimp Fittings Typical Fitting Insert Dimensions

SIZE	A	B	L
1/2"	.315	.473±.003	.700+.020
3/4"	.460	.668±.003	.700+.020
1"	.610	.856±.003	.850+.020

NOTE: Dimensions are in English units. Tolerances shown are ASTM requirements. Viega PolyAlloy PEX Crimp fittings are manufactured within these specifications.



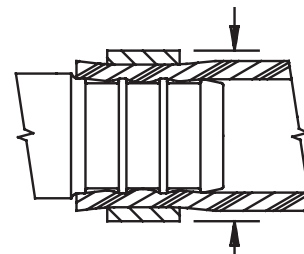
## Copper Crimp Ring Dimensions Before Crimping

SIZE	D	W	T
1/2"	.750	.325	.056
3/4"	1.00	.325	.056
1"	1.25	.365	.049

All dimensions shown are nominal.

## Crimped Diameter Dimensions

Final crimped outside diameters shall fall within these dimensions when measured with a micrometer or caliper.



SIZE	MINIMUM	MAXIMUM
1/2"	~ 0.700"	~ 0.715"
3/4"	~ 0.945"	~ 0.960"
1"	~ 1.175"	~ 1.190"

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