

MATERIAL SPECIFICATION SHEET



LYNX-PEX™ Water Service Tubing

SCOPE:

This material specification designates the requirements for LYNX-PEX™ Water Service Tubing. All LYNX-PEX™ Water Service Tubing corresponds to copper tube size (CTS) dimensions, with wall thicknesses corresponding to Standard Dimension Ratio (SDR) 9.

MATERIALS:

All LYNX-PEX™ Water Service Tubing is manufactured from a cross-linkable high-density polyethylene produced by grafting organo-silanes onto a polyethylene base (PEXb). A catalyst (accelerator) added to the cross-linkable polyethylene during extrusion initiates the cross-linking process. Cross-linking is completed with hot water or steam (sauna). The advanced formulation ensures that when the product is exposed to UV radiation, it will retain both its physical properties, as well as its long-term Chlorine/ORP resistance, at the highest level in the industry today. This single layer product is provided in blue.

MARKING & CERTIFICATION:

All LYNX-PEX™ Water Service Tubing is marked with the name CB Supplies as the manufacturer, nominal size, material designation code PEX 5306 (indicating the industry's highest chlorine and UV resistance ratings), design pressure and temperature ratings, manufacturing date, production code, footage markers in increments of 5 ft., and the listing marks of relevant specifications.

LYNX-PEX™ Water Service Tubing has been evaluated to the following codes and standards:

ANSI/AWWA C904 , Crosslinked Polyethylene (PEX) Pressure Tubing, 1/2 In. (13 mm) Through 3 In. (76 mm), for Water Service	CSA B214 , Installation code for hydronic heating systems
ASTM F876 , Standard Specification for Crosslinked Polyethylene (PEX)	International Plumbing Code® (IPC)
ASTM F877 , Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems	International Mechanical Code® (IMC)
ASTM F1807 , Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing	International Residential Code® (IRC)
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	NSF/ANSI 14 , Plastic Piping System Components and Related Materials
CSA B137.5 , Crosslinked polyethylene (PEX) tubing systems for pressure applications	NSF/ANSI/CAN 61 , Drinking Water System Components – Health Effects
	NSF/ANSI/CAN 372 , Drinking Water System Components – Lead Content
	Uniform Plumbing Code® (UPC)
	Uniform Mechanical Code® (UMC)

RECOMMENDED USES:

LYNX-PEX™ Water Service Tubing is intended and recommended for use with ANSI/AWWA C800 Underground Service Line Valves and Fittings in municipal water distribution systems. Design temperature and pressure ratings for LYNX-PEX™ Water Service Tubing are 160 psi @ 73°F and 100 psi @ 180°F per CSA B137.0 section 6.6.3.1, and 200 psi @ 73°F per CSA B137.0 section 6.6.3.2.2. For information on the suitability for other hot and cold water applications not listed here, consult with your CB Supplies representative.

HANDLING AND INSTALLATION:

LYNX-PEX™ Water Service Tubing is tough yet flexible. However, it is softer than metals and may be damaged by abrasion or by objects with cutting edges. Use of these materials in municipal water distribution systems must be in accordance with good plumbing practices, applicable code requirements and current installation practices available from CB Supplies. LYNX-PEX™ Water Service Tubing is manufactured to meet International, Uniform and Canadian Codes and Standards. Contact a CB Supplies representative or the applicable code enforcement bureau for information about approvals for specific applications.

MATERIAL PROPERTIES:

Property	ASTM Test Method	English Units	SI Units
Density	D1505	–	0.944 g/cc
Melt Index ¹ (190°C/2.16 kg)	D1238	–	0.1 g/10 min
Flexural Modulus ²	D790	152,000 psi	1050 MPa
Tensile Strength @Yield (2 in/min)	D638	2,900 psi	20 MPa
Coefficient of Linear Thermal Expansion @ 68°F	D696	8x10 ⁻⁵ /°F	1.5x10 ⁻⁴ /°C
Hydrostatic Design Basis @ 73°F (23°C)	D2837	1,250 psi	8.6 MPa
Hydrostatic Design Basis @ 180°F (82°C)	D2837	800 psi	5.5 MPa
Vicat Softening Point	D696	255°F	124°C
Thermal Conductivity	D177	2.4 Btu-in/(hr)(ft ²)(°F)	3.5 x 10 ⁻³ Watts/(cm ²)(°C/cm)

1. Before cross-linking
2. 73°F



LYNX-PEX™ Water Service Tubing

QUALITY ASSURANCE

LYNX-PEX™ Water Service Tubing is made with care in Canada and evaluated via regular sampling, randomized site inspections, and independent testing for compliance to all performance and toxicological standards listed herein.

MAXIMUM RESISTANCE

LYNX-PEX™ Water Service Tubing is made from PEX 5306 material, meeting ASTM F876 and CSA B137.5 requirements for the industry's highest chlorine and UV resistance ratings. LYNX-PEX™ Water Service Tubing is tested by accredited third-party laboratories according to ASTM Standard F2023.

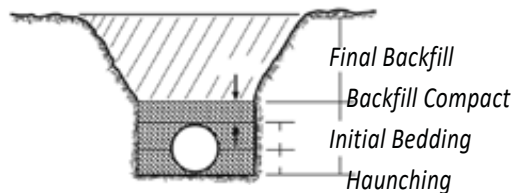
MINIMUM BURST PRESSURE (PSI)

ASTM F876/F877 (CTS-OD) SDR-9

Size	74° F (23° C)	180° F (82° C)
3/4"	475	210
1"	475	210
1-1/4"	475	210
1-1/2"	475	210
2"	475	210

CAUTION!

LYNX-PEX™ Water Service Tubing shall not be installed underground in areas of known chemical contamination of the soil, such as organic solvents or petroleum distillates, or where there is a high risk of chemical spills.



PRESSURE DROP TABLE

Expressed as PSI/FT Pressure Drop (US Gallons / Minute and Nominal I. D. used for calculation)

GPM	Nominal Size				
	3/4"	1"	1-1/4"	1-1/2"	2"
3	.025				
3.5	.033				
4	.041				
5	.061				
6	.084	.026			
7	.111	.034			
8	.141	.042			
9	.173*	.052			
10	.209	.063	.024		
11	.248	.075	.029		
12	.290	.087	.033		
13	.336	.101	.039		
14		.115	.044		
16		.147*	.056	.025	
18		.181	.069	.031	
20		.219	.083	.038	
22		.261	.099*	.045	
24			.116	.052	
26			.134	.060	
28			.153	.069	
30			.174	.078*	
32				.088	.024
34				.098	.027
36				.109	.030
38				.120	.033
40				.132	.036
46				.171	.046
52					.058*
80					.128

EXAMPLE: To calculate the pressure drop of a 3/4" line, 40 ft. long, with a 3 gpm flowrate, calculate .128 psi x 40ft. = 5.12 psi pressure drop. Most plumbing codes require 8 psi residual pressure at the fixture. Refer to your local code requirements.

*Indicates 8 fps maximum velocity allowed by some plumbing codes.

NOTE: Maximum flow for each size based on 12 fps velocity. PSI x 2.307 = headloss.

TUBING DIMENSIONS

ASTM F876 (CTS-OD) SDR-9

Nominal Size	O.D.	Wall Thickness	I.D.	Weight (lbs/ft.)	Volume (Gal/100 ft.)
3/4"	0.875" ± 0.004"	0.097" + 0.010"	0.681"	0.102	1.90
1"	1.125" ± 0.005"	0.125" + 0.013"	0.875"	0.169	3.13
1-1/4"	1.375" ± 0.005"	0.153" + 0.015"	1.069"	0.251	4.53
1-1/2"	1.625" ± 0.006"	0.181" + 0.019"	1.263"	0.352	6.31
2"	2.125" ± 0.006"	0.236" + 0.024"	1.653"	0.599	10.83

NOTE: Dimensions are in English units. Tolerances shown are ASTM requirements. LYNX-PEX™ Water Service Tubing is manufactured to within these specifications.



CB SUPPLIES LTD.
www.cbsupplies.ca

PHONE: 1.800.665.1851
EMAIL: sales@cbsupplies.ca

3325 190th Street
Surrey, BC V3Z 1A7
Canada