

SUBMITTAL SHEET



JOB NAME:	ITEM TAG:
JOB LOCATION:	PART NUMBER:
CONTRACTOR:	DATE:
ENGINEER APPROVAL:	DATE:

CanPEX™ Oxy Barrier Hydronic Radiant Heat Tubing

- Manufactured from cross-linkable high density polyethylene produced by grafting organo-salines onto a polyethylene base.
 - 25 Year limited warranty.
 - Wrapped with UV-blocking clear plastic wrap for protection of the tubing from UV-light oxidation*.
 - Available in nominal tubing sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2" SDR-9 - CTS.
 - Pressure Rated 160 psi (1.10 MPa) @ 73° F (23° C)
 - Pressure Rated 100 psi (0.69 MPa) @ 180° F (82° C)
 - Chlorine Classification Code 5 (100% at 140° F)
- Linear Expansion Rate: 1.1" / 10° F / 100 ft. (2.79 cm / 5.56° C / 30.48 m)
- * CanPEX™ Oxy Barrier tubing must be stored indoors not exposed to direct sunlight**
- MARKINGS, SPECIFICATONS & CERTIFICATION:**
 CanPEX™ Oxy Barrier tubing is marked with the name CB Supplies as the manufacturer, nominal size, plastic tubing material designation code PEX, 5006, manufacturing date and production code and the listing marks as identified in the table below.

Certification Marks

Listing Organization	Listing Standard	Mark
NSF International	CSA B137.5	CSA
NSF International	ASTM F876 / F877	cNSFus
NSF International	NSF/ANSI 61 (Potable Water)	NSF -pw
NSF International	NFS/ANSI 372 Drinking Water System Components-Lead Content	NSF® 372
International Code Council (ICC-ES PMG)	International Plumbing Code® (IPC)us	ICC-ES PMG
IAPMO	Uniform Plumbing Code® (UPC)	
ULC/UL (Underwriters Laboratory of Canada)	CAN/ULC-S101 Fire Endurance Tests of Building Construction and Materials	
ULC/UL (Underwriters Laboratory of Canada)	UL263 Standard For Fire Tests of Building Construction and Materials	
Warnock Hersey**	CAN/ULC-S102.2: Standard Method of Test for Surface Burning Characteristics of building Materials	
Warnock Hersey**	ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials	

- 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.
- 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.
- ASTM F2098 - Standard Specification for Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene (PEX) Tubing to Metal Insert and Plastic Insert Fittings.
- ASTM F2023 - Standard Test Method for Evaluating the Oxidative Resistance of Crosslinked Polyethylene (PEX) Pipe, Tubing and Systems to Hot Chlorinated Water.

**Listing for sizes up to 1"

SDR-9 CanPEX™ Oxy Barrier TUBING

ASTM D876/D877/CTS-OD SDR-9

Stock Code	Tubing Size	O. D.	Wall Thickness	Nom. I. D.	Available Coil Lengths	20' Length	Weight Per Ft.	Volume (Gal/100 ft.)
PXOB2	3/8"	0.500" ± .003"	0.070" + .010"	0.360	(Special Order)	(Special Order)	0.0413	0.53
PXOB3	1/2"	0.625" ± .004"	0.070" + .010"	0.485	100', 200', 250', 300', 500', 1000' & 1200'	Yes	0.0535	0.97
PXOB4	3/4"	0.875" ± .004"	0.097" + .010"	0.681	100', 200', 250', 300', 500' & 1000'	Yes	0.1023	1.90
PXOB5	1"	1.125" ± .005"	0.125" + .013"	0.875	100', 200', 250', 300', 500' & 1000'	Yes	0.1689	3.13
PXOB6	1 1/4"	1.375" ± .005"	0.153" + .015"	1.069	(Available Soon)	(Available Soon)	0.251	4.52
PXOB7	1 1/2"	1.625" ± .006"	0.181" + .019"	1.263	(Available Soon)	(Available Soon)	0.352	6.30
PXOB8	2"	2.125" ± .006"	0.236" + .024"	1.653	(Available Soon)	(Available Soon)	0.599	10.80

TECHNICAL INFORMATION

MATERIAL PROPERTIES:

Property	Test Method	English Units	SI Units
Density	ASTM D1505	–	0.950 g/cc
Melt Index ¹ (190°C/2.16 k g)	ASTM D1238	–	0.1 g/10 min
Flexural Modulus ²	ASTM D790	152,000 psi	1050 MPa
Tensile Strength @ Yield (2 in/min)	ASTM D638	>3,500 psi	>24.1 MPa
Coefficient of Linear Thermal Expansion (20 - 70°C)	DIN 53752A	8x10 ⁻⁵ /°F	1.5 x10 ⁻⁵ /°C
Hydrostatic Design Basis @ 73°F (23°C)	ASTM D2837	1250 psi	8.6 MPa
Hydrostatic Design Basis @ 180°F (82°C)	ASTM D2837	800 psi	5.5 MPa
Vicat Softening Point	ASTM D696	255° F	124° C
Thermal Conductivity	ASTM D 177	2.4 Btu-in/(hr)(ft ²)(°F)	3.5x10 ⁻³ Watts/(cm ²)(°C/cm)

1. Before cross-linking

2. 73°F

QUALITY ASSURANCE

When the product is marked with ASTM D876/D877 and CSA B137.5 designations, it affirms that the product was manufactured, inspected, sampled and tested in accordance with these specifications and it has been found to meet the specified requirements.

MINIMUM BURST PRESSURE (PSI)

Per ASTM D876/CTS-OD SDR-9

Nominal Size	73.4° (23°C)	180° (82.2°C)
3/8"	620	275
1/2"	480	215
3/4"	475	210
1"	475	210
1 1/4"	475	210
1 1/2"	475	210
2"	475	210

Dimension X For Loop End	
Tubing Size	With the Coil
1/2"	10"
5/8"	12"
3/4"	14"
1"	18"
1 1/4"	22"
1 1/2"	26"
2"	38"

CANPEX OXY Barrier Oxygen Permeation: All sizes have less than 0.1 grams/m³/day.

NOTE: CANPEX OXY Barrier Tubing meets DIN 4726 requirements for oxygen tight pipes.

Notes:

PRESSURE DROP TABLE

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

GPM	Size						
	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
1	.061	.014					
1.5	.130	.030					
2.2	.264	.062					
2.5	.334*	.078					
3	.468	.110	.021				
3.5	.623	.146	.028				
4		.187*	.036				
5		.283	.054				
6		.396	.076	.022			
7		.528	.101	.030			
8			.130	.038			
9			.161*	.048			
10			.196	.058	.022		
11			.234	.069	.026		
12			.275	.081	.031		
13			.381	.094	.035		
14				.108*	.041		
16				.138	.052	.023	
18				.172	.065	.029	
20				.209	.079	.035	
22				.249	.094*	.042	
24					.110	.049	
26					.128	.057	
28					.147	.065	
30					.167	.074*	
32						.188	.084
34							.094
36							.104
38							.115
40							.126
46							.164
52							.055*
80							.123

EXAMPLE: To calculate the pressure drop of a 1/2" line, 40 ft. long, with a 3 gpm flow rate, calculate .110 psi x 40 ft. = 4.4 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 = head loss.



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