

CONNECT TO BETTER

Wavin PE-XB and Oxygen Barrieroed PE-XB Pipes

Heating applications



Features:

- Rustproof, calcifyproof, imperishable
- Odorless on plumbing
- Comforing the standards of hygiene
- Light, easy to carry and install
- Low friction capacity
- Resistant to electrolyzed
- Resistant to chemicals
- Resistant to the degrees of +95°C - -40°C
- Lifespan of 50 years

Usage Areas:

- They may be installed on the plumbing below in Industrial facilities as hostels, hospitals, houses, greenhouses etc.
- Heating /cooling systems on floor or wall
 - Hot/Cold usage water (plumbing installation) systems
 - Mobile Radiator connections
 - Geothermic heating systems
 - Pressurized water and overheat lines
 - Pool heating
 - Car heating systems
 - Subsoil pipe lying without bedding

Detailed Information:

PE-Xb pipes are formed with extrusion technique, then the carbon atoms are cross linked under the high pressure and heat using monosil method. Hot water is circulated inside at 95°C and 10 bar for minimum 4 hours. Cross linking process is increased to the level of 65%. Cross linking increases the resistant of density of links and brittleness. Flexibility rate decreases while the cross links increase and causes fragility in low temperatures. It is easy to install due to its flexible structure and lightweight. It is not fragile against scoring, It has a low rate of damaging during processing. PE-XB pipes; are produced appropriate for the standards of TS-EN-10762 EN 15875-2 (Plastic Pipe systems / Cross linked for hot and cold water PE-X) and tested afterwards. Pipes; produced as covered or straight. While covers are not used in applications required a heat transfer as floor heating, it is used in situations that is not required

a heat loss as mobile radiator connection. Besides, in covered systems, it is possible to change the pipe by withdrawing it from the cover in order to maintain. Pipes are produced as with or without an oxygen barrier as well. Oxygen barriered pipes are decrease the transportation of oxygen inside the pipe preventing the metal parts from getting corrode. Thus, lifelong of the installation gets longer. The oxygen barriered pipes produced in Wavin Pilsa Adana, is formed with a certain film layer consisting Polyamide PE-X pipes are thermoset products. they cannot be reformed with heat, recycle or reprocessed once it is formed. Pipes are to be used with the standard issue compressing, threaded, press-fit and pushfit pieces can be supplied from the market. The additional pieces that exists in Wavin Pilsa's product range and used in floor heat are; lama, lama clip, corner spinner and fixing hooks for floor.

Compressive Strength

Compressive strength is given on the tale below divided by the installation classes according to the TS-EN-10762 EN 15875-2 standards.

PE-Xb Pipes (mm)	PN	S	Compressive Strength (According to the Installation Type)
Ø16 x 1,8	16	4	1/8 - 2/8 - 4/10 - 5/8
Ø16 x 2	18	3,5	1/10 - 2/10 - 4/10 - 5/8
Ø16 x 2,2	20	3,2	1/10 - 2/10 - 4/10 - 5/10

Pipe Wall Thicknesses and Other Physical Properties

	Range mm	Coil/length metre	Pipe Wall Thickness mm (S4 - PN16)	Pipe Wall Thickness mm (S3,5 - PN18)	Pipe Wall Thickness mm (S3,2 - PN20)	Pipe Colour	Cover Colour
Straight PE-Xb Straight Oxy PE-Xb	16	160	1,8	2	2,2	Transparent	
Covered Straight PE-Xb Covered Oxy PE-Xb	16	100	1,8	2	2,2	Transparent	Red/Blue

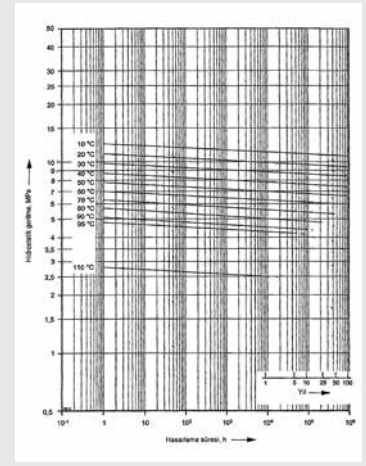
Mechanical and Thermal Properties of the Pe-Xb Raw Material

Features	Test Conditions	Unit	Method of Test	Result
MRS Classification (Minimum Required Endurance)	20°C, extrapolation 50 years	MPa	ISO 9080	10
Density	23°C	g/cm³	ISO 1183	min 0,940
Melt Flow Index	190°C, 5 kg	g/10dk	ISO 1133	0,5 - 3,0
Endurance to Tension at Pour Point	23°C, 50 mm/min	MPa	ISO 527	min 20 MPa
Stretching at the Breakaway Point	23°C, 50 mm/min	%	ISO 527	min %350
Vicat Softening Temperature	-	°C	ASTM D 1525	120 - 130
Coefficient of Linear Expansion (0°C/90°C)	-	1/K	DIN 53752	1,4 - 1,9*10 ⁻⁴
Scale of Cross Bonding	-	%	EN 579	min 65%
Method of Cross Bonding	-	-		Monosil-Silane

Thermal Expansion Coefficient: 20°C - 70°C : 1,4 - 2 x 10⁻⁴ (1/K) • Thermal Conductivity Coefficient: 0,42 - 0,48 W/mk

Service Life Table

Safety Factor = 1.5		
Year	Heat °C	16*2mm PE-X Pipe Pressure (bar)
1	20	18,9
5	20	18,6
10	20	18,4
25	20	18,2
50	20	18,1
1	30	16,8
5	30	16,5
10	30	16,4
25	30	16,2
50	30	16,1
1	40	15,0
5	40	14,7
10	40	14,5
25	40	14,4
50	40	14,3
1	50	13,3
5	50	13,1
10	50	13,0
25	50	12,8
50	50	12,7
1	60	11,9
5	60	11,7
10	60	11,6
25	60	11,4
50	60	11,3
1	70	10,7
5	70	10,5
10	70	10,4
25	70	10,2
50	70	10,2
1	80	9,6
5	80	9,4
10	80	9,3
25	80	9,2
1	95	8,2
5	95	8,0
10	95	7,9



Graph of Environmental Stress.

Graph of Mechanical Resistance - Service Life For Pe-X - Service Life Table

For PE-X pipes, standard service life graphs are given. Environmental stress of the pipes are declared according to the Graph of Service Life and Service Life tables are prepared according to the environmental stress.