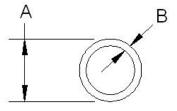
Construction Automotive Industry



## **PRODUCT SUBMITTAL 110**

Product:MUNICIPEX® PipeDate:01 January 2017 ( supersedes 24 August 2015)

REHAU® - MUNICIPEX Pipe



Article No.	Nominal Diameter in	Average OD A in (mm)	Wall Thickness B in (mm)	Weight Ib/ft (kg/m)	Capacity gal/ft (I/m)
261056	3/4	0.875 (22.22)	0.097 (2.47)	0.10 (0.15)	0.0189 (0.2356)
261076	1	1.125 (28.582)	0.125 (3.18)	0.17 (0.26)	0.0316 (0.3939)
261096	1 1/4	1.375 (34.92)	0.153 (3.88)	0.25 (0.37)	0.0467 (0.5827)
261116	1 1/2	1.625 (41.28)	0.181 (4.59)	0.35 (0.52)	0.0650 (0.8118)
261136	2	2.125 (53.98)	0.236 (6.00)	0.60 (0.90)	0.1114 (1.3906)

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Specification	English	SI	Standard
Minimum Density	58 lb/ft <sup>3</sup>	926 kg/m <sup>3</sup>	ASTM F876
Minimum Degree of Crosslinking	70%	70%	ASTM F876
Max. Thermal Conductivity	2.84 Btu in/(ft <sup>2</sup> °F hr)	0.41 w/(m°K)	DIN 16892
Coefficient of Linear Expansion	9.33 x 10-4 in/ft°F @ 68°F 1.33 x 10-3 in/ft°F @ 212°F	0.14 mm/(m°C) @ 20°C 0.2 mm/(m°C) @ 100°C	Mean @ 20-70°C per DIN 16892
Modulus of Elasticity	87,000-130,500 psi @ 68°F 43,500-58,000 psi @ 176°F	600-900 N/mm <sup>2</sup> @ 20°C 300-400 N/mm <sup>2</sup> @ 80°C	Minimum @ 20°C per DIN 16892
Tensile Strength	4,194-4,355 psi @ 68°F 2,610-2,900 psi @ 176°F per ASTM D638	26-30 N/mm <sup>2</sup> @ 20°C 18-20 N/mm <sup>2</sup> @ 80°C per ASTM D638	
IZOD Impact Resistance	No Break	No Break	
Temperature Working Range	-40 to 200°F	-40 to 93°C	
Roughness	e=0.00028 in	e=0.007 mm	
Max. Short-term Exposure	150 psig @ 210°F (48 hr)	1035 kPa @ 99°C (48 hr)	ASTM F876
UV Resistance	See TB218		ASTM F2657

## TECHNICAL DESCRIPTION

## FUNCTIONAL DESCRIPTION

MUNICIPEX is manufactured using the high-pressure peroxide extrusion method for crosslinked polyethylene (PEXa). MUNICIPEX has a co-extruded blue PE shield that protects the pipe against ultraviolet light (sunlight) for an extended time. MUNICIPEX pipe meets or exceeds the requirements of ASTM F876, CSA B137.5 and PPI TR-3, and is certified to NSF Standards 14/61 and AWWA C904. MUNICIPEX meets the requirements of ASTM F2023 for chlorine resistance. MUNICIPEX is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001.

MUNICIPEX is produced in SDR9 copper tube sizes (CTS) so that it is compatible with AWWA C800 valves and fittings when used with manufacturer's recommended insert which is required to stiffen the pipe. MUNICIPEX can also be used with the EVERLOC+<sup>®</sup> compression-sleeve system certified to ASTM F877. See Technical Bulletin 261 for other compatible PEX fitting systems

## LONG-TERM STRENGTH

The maximum temperature and pressure ratings of the MUNICIPEX pipe are in accordance to ASTM F876, CSA B137.5 and PPI TR-3. The designer shall determine the actual conditions and apply the appropriate and additional design factors as required for any particular project. The temperature and pressure ratings apply to the application of MUNICIPEX pipe for conveying hot and cold water at the 2.0 safety factor on allowable working pressure according to ASTM and CSA. REHAU confirms a 200 psi (1380 kPa) pressure rating at 73.4°F (23°C) when using a 1.5 safety factor, see REHAU *Technical Bulletin 239 MUNICIPEX Pressure and Temperature Ratings*. According to the REHAU *PEXa Limited Warranty*, the MUNICIPEX pipe warranty period of 25 years is for operating conditions at or below 180°F (82.2°C) in permitted applications when the handling, use, installation and maintenance continually complies with all REHAU technical guidelines.

MUNICIPEX SDR9					
maximum pressures and temperatures	design factors				
200 psi @ 73.4°F (1380 kPa @ 23°C)	0.63 (per CSA B137.0 clause 6.6.3.2.2, REHAU TB239)				
160 psi @ 73.4°F (1055 kPa @ 23°C)	0.50 (per ASTM F876, CSA B137.5)				
100 psi @ 180°F (690 kPa @ 82.2°C)	0.50 (per ASTM F876, CSA B137.5)				