

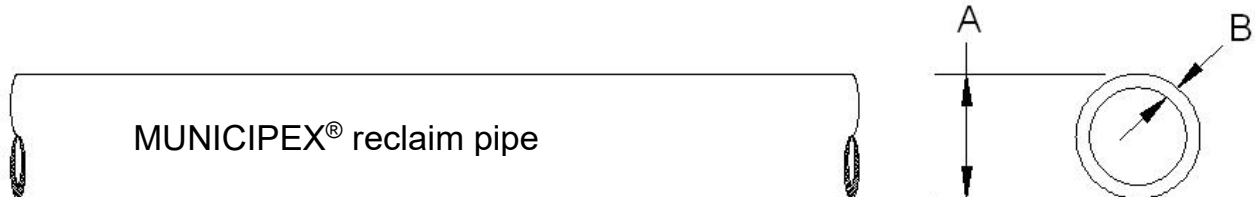
# PRODUCT SUBMITTAL 114

## MUNICIPEX® reclaim pipe



**Product:** MUNICIPEX® reclaim pipe

**Date:** 31 March 2022



| Article no. | Nominal diameter in | Average OD A In (mm) | Wall thickness B In (mm) | Weight Lb/ft (kg/m) | Capacity Gal/ft (l/m) |
|-------------|---------------------|----------------------|--------------------------|---------------------|-----------------------|
| 302706      | 1                   | 1.125 (28.582)       | 0.125 (3.18)             | 0.17 (0.26)         | 0.0316 (0.3939)       |
| 302708      | 2                   | 2.125 (53.98)        | 0.236 (6.00)             | 0.60 (0.90)         | 0.1114 (1.3906)       |

### TECHNICAL DESCRIPTION

| 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 <sup>-4</sup> in/ft°F @ 68°F<br>1.33 x 10 <sup>-3</sup> in/ft°F @ 212°F | 0.14 mm/(m°C) @ 20°C<br>0.2 mm/(m°C) @ 100°C                                      | Mean @ 20-70°C per<br>DIN 16892 |
| Modulus of Elasticity           | 87,000-130,500 psi @ 68°F<br>43,500-58,000 psi @ 176°F                            | 600-900 N/mm <sup>2</sup> @ 20°C<br>300-400 N/mm <sup>2</sup> @ 80°C              | Minimum @ 20°C per<br>DIN 16892 |
| Tensile Strength                | 4,194-4,355 psi @ 68°F<br>2,610-2,900 psi @ 176°F per<br>ASTM D638                | 26-30 N/mm <sup>2</sup> @ 20°C<br>18-20 N/mm <sup>2</sup> @ 80°C per<br>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                      |

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### FUNCTIONAL DESCRIPTION

MUNICIPEX reclaim pipe is manufactured using the high-pressure peroxide extrusion method for crosslinked polyethylene (PEXa). MUNICIPEX reclaim has a co-extruded purple PE shield that protects the pipe against ultraviolet light (sunlight) for an extended time and indicates use in reclaimed water applications. MUNICIPEX reclaim meets or exceeds the requirements of ASTM F876, CSA B137.5, and is certified to NSF Standard 14 and AWWA C904 for use in reclaimed water applications (cNSFus-rw). MUNICIPEX reclaim meets the requirements of ASTM F2023 for chlorine resistance. MUNICIPEX reclaim is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001.

MUNICIPEX reclaim 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 reclaim can also be used with the EVERLOC+® compression-sleeve system certified to ASTM F877.

### LONG-TERM STRENGTH

The maximum temperature and pressure ratings of the MUNICIPEX reclaim are in accordance to ASTM F876, CSA B137.5. 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 reclaim 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 reclaim 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 reclaim pipe 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)                    |

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