



## MUNICIPEX<sup>®</sup> WATER SERVICE LINE

TESTED. TRUSTED. CHOSEN BY PROFESSIONALS.

# ENGINEERED FOR POTABLE WATER

## ONE BILLION FEET OF INSTALLATION EXPERIENCE



REHAU's MUNICIPEX (PEXa) crosslinked polyethylene service line pipe is backed by more than 40 years and more than 1 billion feet (300 million meters) of installation experience worldwide. MUNICIPEX meets or exceeds all required certifications, is the first PEX pipe certified by AWWA C904 and is field-proven for use in municipal service lines.

Mineral build-up and corrosion from both soil and water are common problems in buried copper service lines. MUNICIPEX has a smoother interior, resulting in minimal flow restriction. Unlike copper or composite tubing, MUNICIPEX does not contain any metal. It is an engineered polymer water service line that resists corrosion, delivering greater service life while retaining maximum flow.

MUNICIPEX may also be used for other water applications such as splash parks, water parks and some industrial facilities. Contact REHAU about using MUNICIPEX for other water supply applications.

### Superior Performance

MUNICIPEX pipe is manufactured using REHAU's high-pressure peroxide method for crosslinked polyethylene pipe. It is co-extruded with a PE shield that protects the pipe when exposed to ultraviolet light for an extended time. This manufacturing process provides MUNICIPEX with enhanced benefits over other water service line pipes in the market.

According to a Plastics Pipe Institute (PPI) report<sup>1</sup>, PEXa pipes such as MUNICIPEX surpass the performance of HDPE in the following ways:

- Increased environmental stress crack resistance
- Increased resistance to slow crack growth
- Increased resistance to creep
- Increased hydrostatic design basis (HDB) pressure at 180°F (82.2°C)
- Increased flexibility
- Increased elongation to break

Compared to traditional copper pipe, MUNICIPEX is:

- More affordable
- More resistant to corrosion
- Lighter weight and easier to handle and install
- Able to be squeezed shut without damage to the pipe during curb stop replacement
- More resistant to freezing issues

MUNICIPEX is an engineered solution that optimizes performance and affordability in water service line applications.

### Meets or Exceeds Industry Standards

- Manufactured in accordance with AWWA C904 and to SDR9 copper tube sizes (CTS)
- Certified to CSA B137.5, *Crosslinked Polyethylene (PEX) Tubing for Pressure Applications*
- Certified to ASTM F876
- Certified to NSF/ANSI Standard 14 and 61 (NSF-pw-g)
- Exceeds chlorine resistance requirements of ASTM F876, when tested in accordance with ASTM F2023
- In accordance with UV resistance to ASTM F2657 for 1 year



*Superior corrosion and impact resistance, excellent flow capacity and low cost make MUNICIPEX the obvious choice for municipal specifiers.*

<sup>1</sup> Source: PPI Reference TN-17

# PERFORMANCE PROPERTIES

## PROVEN RELIABILITY

For service line and underground applications, it is the responsibility of the installer to ensure fittings selected meet local jurisdictional codes.



Pipe sizes 3/4 to 2 in.



No internal deposits



Corrosion build-up in metal pipes

### SDR9 Copper Tube Sizes (CTS)

Produced to copper tube size OD, MUNICIPEX connects to standard, off-the-shelf, potable water fitting solutions such as AWWA C800 compression joint valves and fittings and ASTM F2080 brass compression-sleeve fittings. When using AWWA C800 fittings, the manufacturer's recommended insert is required to stiffen the pipe at these connections. These fitting options make MUNICIPEX pipe easy and convenient to install.

### Tools

No special tools are required for MUNICIPEX connections. Standard pipe wrenches are used with compression joint connections.

### Corrosion Resistance

As a polymer material, MUNICIPEX resists corrosion in soil or aggressive water conditions.

### Mineral Build-up Resistance

MUNICIPEX resists scaling and internal deposits.

### Chlorine Resistance

MUNICIPEX exceeds the requirements of ASTM F876 for chlorine resistance, when tested in accordance with ASTM F2023, and is listed by NSF for chlorine resistance.

### Chemical Resistance

MUNICIPEX is resistant to a wide range of chemicals. However, while some chemicals may not harm MUNICIPEX, chemical concentration, temperature, pressure and other parameters can influence the suitability and service life of the MUNICIPEX application. Do not bury MUNICIPEX in contaminated soil. If you have questions regarding chemical compatibility, please contact your REHAU regional sales office.

### Freeze Resistance

Unlike HDPE and copper pipes, MUNICIPEX will not split when frozen, if allowed to expand along its entire length. It will return to its original shape when thawed.

1. Thawing can be performed by using available hot water injection equipment. After thawing, MUNICIPEX can immediately be put back into service.

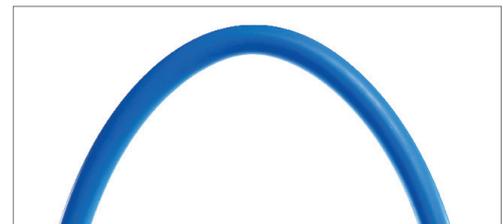
2. Thawing can also be performed by applying hot air to the pipe. When using a hot air gun to heat frozen areas, ensure that the temperature of the pipe does not exceed 210°F (93.3°C). Do not use an open flame to thaw MUNICIPEX.

### Abrasion Resistance

The increased abrasion resistance of crosslinked polyethylene pipe ensures long service life even in directional drilling applications.

### High Impact Resistance

MUNICIPEX is more flexible than other piping materials, and will not crush, kink or collapse when proper backfill techniques are used. MUNICIPEX also has high resistance to gouges or scratches and outstanding resistance to slow crack growth. Even at temperatures as low as -40°F (-40°C) MUNICIPEX will not become brittle.



Prevent kinks; bend pipe more slowly in cold temperatures

### Excellent Temperature-Pressure Capabilities

Minimum Burst Pressure Requirements

- 475 psi @ 73.4°F (3,310 kPa @ 23°C)
- 210 psi @ 180°F (690 kPa @ 82.2°C)
- 180 psi @ 200°F (550 kPa @ 93.3°C)

MUNICIPEX carries the following continuous-use temperature and pressure ratings

- 160 psi @ 73.4°F (1,105 kPa @ 23°C)
- 100 psi @ 180°F (690 kPa @ 82°C)
- 200 psi @ 73.4°F (1,380 kPa @ 23°C)  
using design factor of 0.63\*

\*see REHAU Technical Bulletin 239 for clarification

### Lightweight

MUNICIPEX is five to six times lighter than copper, is easy to handle and economical to ship.

### Waste Reduction

MUNICIPEX is supplied in coils, minimizing joints, reducing waste, speeding installation and saving money.

### Kink Resistance

MUNICIPEX is more flexible than HDPE or composite pipes and will resist kinking even at temperatures well below freezing. Kinking can be prevented by bending the pipe more slowly in cold temperatures, taking care not to bend it too far.

If MUNICIPEX becomes kinked, unlike HDPE, it can be repaired without cutting. To repair a kink, carefully heat the kinked area with a hot air gun until the kink disappears and the pipe becomes round (approximately 275°F [135°C]), then remove heat and let the pipe cool before moving it. There must be no pressure or stress on the pipe during heating to prevent deformation. Small bubbles or wrinkles may appear on the blue UV shield – this is normal.

### MUNICIPEX Product Offering

Article No.	Available Coil Lengths	Weight lb/ft (kg/m)	Bend radius in (cm)	Coils per pallet
<b>3/4 in.</b>				
261056-100	100 ft (30.5 m)	0.10 (0.15)	4.50 (11.25)	62
261056-300	300 ft (91.4 m)			23
261056-500	500 ft (152.4 m)			14
261056-000	1,000 ft (304.8 m)			7
<b>1 in.</b>				
261076-100	100 ft (30.5 m)	0.17 (0.26)	5.75 (14.40)	23
261076-300	300 ft (91.4 m)			14
261076-500	500 ft (152.4 m)			7
261076-000	1,000 ft (304.8 m)			5
<b>1 1/4 in.</b>				
261096-100	100 ft (30.5 m)	0.25 (0.37)	7.00 (17.80)	10
<b>1 1/2 in.</b>				
261116-100	100 ft (30.5 m)	0.35 (0.52)	8.25 (21.00)	5
261116-300	300 ft (91.4 m)			5
261116-500	500 ft (152.4 m)			5
261116-111	1,000 ft (304.8 m)			5
<b>2 in.</b>				
261136-100	100 ft (30.5 m)	0.60 (0.90)	10.75 (27.30)	5
261136-300	300 ft (91.4 m)			4
261136-500	500 ft (152.4 m)			5
261136-111	1,000 ft (304.8 m)			2

### UV Resistance

MUNICIPEX meets the requirements for ASTM F2657 and has a maximum exposure limit to sunlight of up to one year. MUNICIPEX should not be permanently installed in direct sunlight, either outdoors or indoors. Follow all handling and installation instructions found on the packaging.

All MUNICIPEX pipe is shipped in protective packaging. MUNICIPEX should be stored in the original packaging until time of installation.



*Repair kinks without cutting*

# INSTALLATION

## EASY TO HANDLE

Lightweight and flexible, MUNICIPEX is supplied in longer coils to reduce the number of couplings, minimize waste and speed installation. Being five to six times lighter than copper, MUNICIPEX is easier and safer to handle. It is also easier to plan an installation as consecutive footage marks on the pipe indicate the length and how much material is available. Allowing a slight curve while laying MUNICIPEX in the trench is all that is required to accommodate expansion and contraction. Follow all published installation instructions.

For additional information, please refer to REHAU MUNICIPEX® *Installation Guide* or contact your regional REHAU sales office.

Using a squeeze-off tool to temporarily stop the water flow through MUNICIPEX will not cause permanent damage or deformation to the service line, and is the fastest and cleanest way to temporarily stop flow through the pipe, such as when replacing a curb stop or other shut-off valve.



*Standard tools and connections*





As a leading supplier of polymer-based solutions to construction, REHAU addresses sustainable design priorities by engineering products that enhance comfort and convenience, reduce energy costs, create healthy and safe environments, and conserve finite resources.

For updates to this publication, visit [na.rehau.com/resourcecenter](http://na.rehau.com/resourcecenter)

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