

HOW MUCH “X” IS IN YOUR PEX? AND WHY WE THINK YOU’LL CARE

With 20% More Crosslinking, REHAU MUNICIPEX® PEXa Water Service Line Outperforms PEXb Pipes

MUNICIPEX pipe is made with a high-pressure peroxide crosslinking process, pioneered by REHAU in 1968. The result is a highly crosslinked, flexible polymer pipe known as PEXa. Other forms of PEX typically have 15-20% less crosslinking, which reduces performance on the job in several important ways shown below:

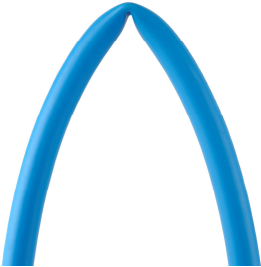



Property	MUNICIPEX PEXa	PEXb	What This Means
Degree of crosslinking	Typically 85 to 89%	Typically 65 to 75%	High degree of crosslinking provides MUNICIPEX with superior mechanical, flexibility and thermal memory properties allowing it to outperform PEXb in all aspects related to water service line operation
Crosslinking process	REHAU high-pressure peroxide method, occurs during extrusion ¹	Silane (Sioplas), secondary moisture-cure process, occurs post extrusion	MUNICIPEX has the highest pressure rating of all PEX products making it suitable for a larger range of applications
Pressure rating	200 psi @73.4°F based on a 0.63 design factor	160 psi @ 73.4°F	<ul style="list-style-type: none"> – MUNICIPEX is not damaged by squeeze-off tool used to stop water flow during repair of fittings and curb stops – MUNICIPEX withstands freezing without breaking² – MUNICIPEX is compatible with ASTM F2080 compression-sleeve fittings, significantly reducing the possibility of pullouts
Thermal memory	Excellent, pipe can be expanded, even in conditions as cold as -40°F (-40°C), and returns to original shape	Insufficient, pipe cannot be expanded without potential irreparable damage; will not return to original shape	Kinked MUNICIPEX does not need to be scrapped and the need for “repair” fittings is eliminated saving material and time
Kink/crush repair capability	Yes, using a squeeze-off tool or hot-air gun; kink is removed and pipe is re-rounded	No approved repair method: kink must be cut out and coupling installed	MUNICIPEX is approved for horizontal directional drilling applications, even in rocky soil, due to superior stress crack resistance
Elongation to break	PEXa pipes withstand elongation of more than 400% without breakage	With less crosslinking, PEXb pipe is stiffer and tears with only 50% elongation	MUNICIPEX bends more easily, making installations faster with less chance of kinking
Coil memory Minimum bending radius	Bends easily in any direction As tight as 5 x OD	Tough to straighten out As tight as 6 x OD ³	MUNICIPEX provides more flexibility and added safety for scheduling installations, material handling and backfilling trenches
UV exposure	MUNICIPEX has a material designation of “3” and is warranted for up to 1 year of UV exposure, making it the most UV resistant PEX pipe	Up to 60 days ³ Some PEXb products have a material designation of “0” which means no UV rating	
Coil size	Up to 1,000 ft	Up to 300 ft ³	Longer runs of MUNICIPEX can be made without couplings, whether in a trench or directional drilling installation

¹ REHAU first to license PEXa high-pressure peroxide method, 1967 ² Refer to MUNICIPEX Installation Guide ³ Per IPEX Blue904 Installation Guide

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With less “X” (crosslinking), PEXb may be vulnerable while MUNICIPEX stands up to tough jobsite conditions.

Kink Test Results	
<p>MUNICIPEX</p>  <ul style="list-style-type: none">- No cracks or breaks even after minutes of bending and kinking- Kinked pipes can be repaired using a hot-air gun or squeeze-off tool	<p>PEXb</p>  <ul style="list-style-type: none">- Irreparable damage occurs after just one bend, causing PEXb manufacturers to require kinked pipes to be cut and repaired with a coupling- Full breakage can occur
Kink/Crush Repair Capability	
<p>MUNICIPEX</p>  <p>Only MUNICIPEX offers temporary water shut-off:</p> <ul style="list-style-type: none">- Flow can be stopped for repairs using squeeze-off tool- Pipe can be effectively re-rounded using the same tool	<p>PEXb</p>  <ul style="list-style-type: none">- No approved repair method; kink must be cut and coupling installed

MUNICIPEX offers municipal and utility engineers a proven, cost-effective AWWA C904-approved water service line solution with benefits superior to other forms of PEX and HDPE. MUNICIPEX water service line is backed by nearly 45 years of experience, and is field-proven with more than 10 years in North American water service line applications. For more information about MUNICIPEX, visit www.municipex.com or contact your local REHAU representative at 1-855-686-4739.