

PP-R Pipe and Fittings

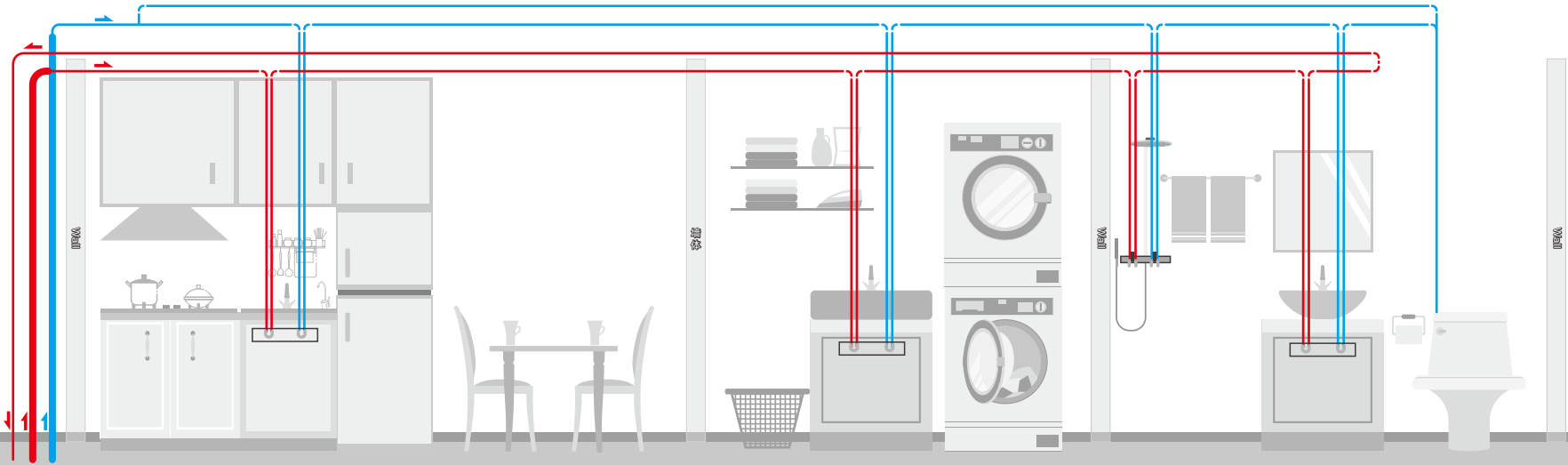
Applications: Hot and cold potable water piping in residential, industrial and public installations.

- Low Thermal Conductivity
- Long Service Life & Durability
- Ecological & Economic



MENRED Living Water System

The Living Water System is a piping design using loop connection and series connection. The water used at the outlet point of the whole living water pipe section can circulate the water of the whole piping system, and there is no stagnant section of the water circuit after turning on, so this prevents the propagation of microorganisms such as Legionella from contaminating the water.

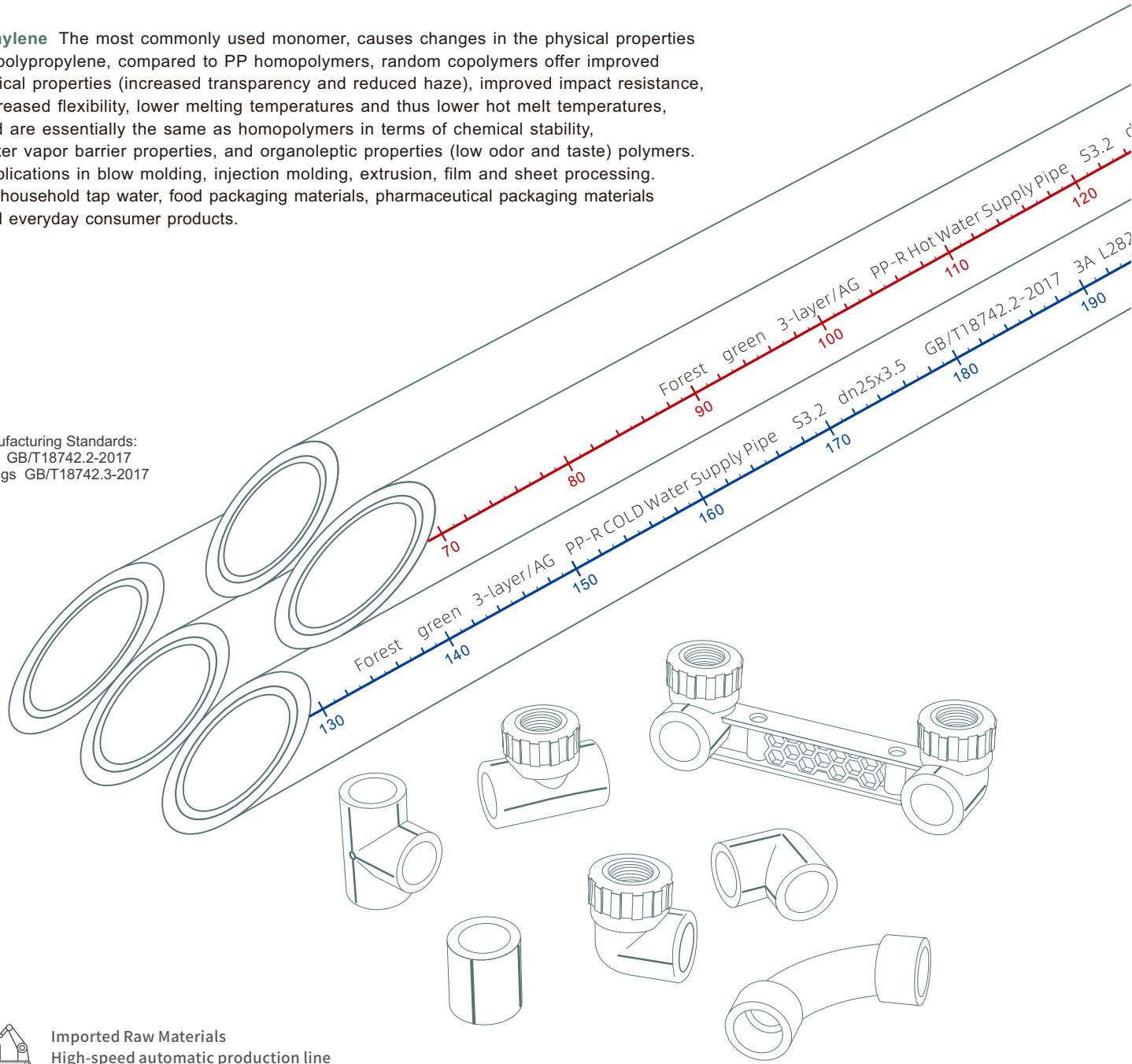


MENRED 3-layer Polypropylene Radom pipe for hot and cold water · PP-R with meter scale.

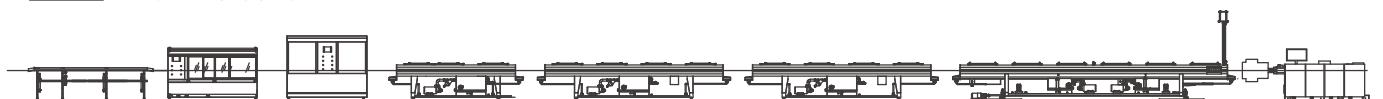
PP-R Generally refers to random copolymerized polypropylene, also a type of polypropylene whose basic polymer chain structure is modified by the addition of different types of monomer molecules.

Ethylene The most commonly used monomer, causes changes in the physical properties of polypropylene, compared to PP homopolymers, random copolymers offer improved optical properties (increased transparency and reduced haze), improved impact resistance, increased flexibility, lower melting temperatures and thus lower hot melt temperatures, and are essentially the same as homopolymers in terms of chemical stability, water vapor barrier properties, and organoleptic properties (low odor and taste) polymers. Applications in blow molding, injection molding, extrusion, film and sheet processing. As household tap water, food packaging materials, pharmaceutical packaging materials and everyday consumer products.

Manufacturing Standards:
 Pipe GB/T18742.2-2017
 Fittings GB/T18742.3-2017

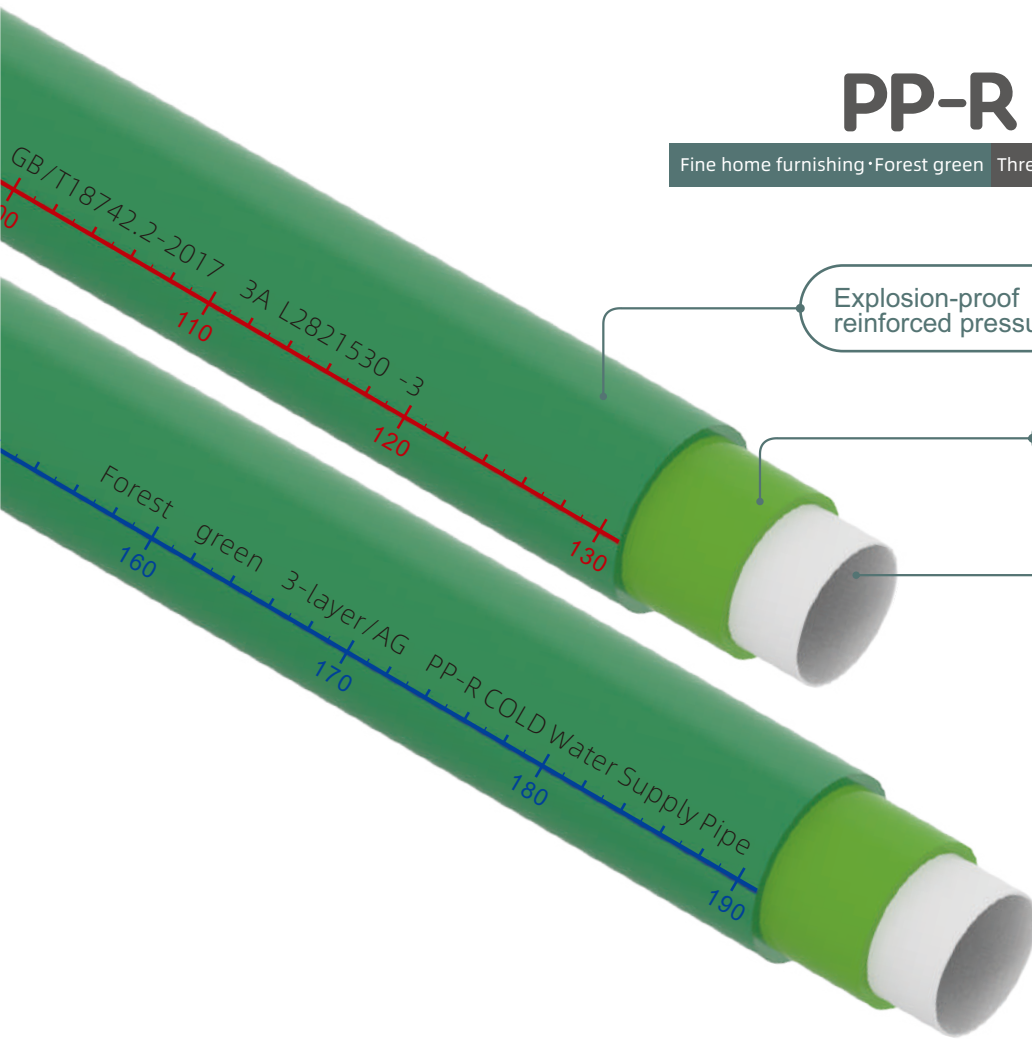


 Imported Raw Materials
 High-speed automatic production line
 TAILORED MANUFACTURING



PP-R WATER PIPE

Fine home furnishing · Forest green Three layer polypropylene pipe for hot and cold water



| Product Name | Product Specification | Number of small packages (package/pipes/meter) |
|----------------|-----------------------|--|
| PP-R Pipe S5 | 20×2.0mm | 5×8×3 |
| | 25×2.3mm | 5×5×3 |
| | 32×2.9mm | 5×3×3 |
| | 40×3.7mm | 10×4 |
| | 50×4.5mm | 7×4 |
| | 63×5.8mm | 4×4 |
| PP-R Pipe S4 | 20×2.3mm | 5×8×3 |
| | 25×2.8mm | 5×5×3 |
| | 32×3.6mm | 5×3×3 |
| | 40×4.5mm | 10×4 |
| PP-R Pipe S3.2 | 50×5.6mm | 7×4 |
| | 63×7.1mm | 4×4 |
| | 20×2.8mm | 5×8×3 |
| | 25×3.5mm | 5×5×3 |
| | 32×4.4mm | 5×3×3 |
| PP-R Pipe S2.5 | 40×5.5mm | 10×4 |
| | 50×6.9mm | 7×4 |
| | 63×8.6mm | 4×4 |
| | 20×3.4mm | 5×8×3 |
| | 25×4.2mm | 5×5×3 |

| | | | |
|--|--|---|--|
| <p>Original imported, high quality raw materials manufacturing</p> | <p>High temperature resistance, corrosion resistance, eliminate microbial breeding</p> | <p>Pipe aging resistance, good compression resistance</p> | <p>Good thermal insulation, fast thermal conductivity, effectively block heat and light source</p> |
| <p>Raw materials are green and non polluting (free of heavy metals), which is recyclable</p> | <p>Comply with international drinking water health standards, can be used in residential drinking water system</p> | <p>Hot-melt connection process, convenient construction and reliable connection</p> | <p>PP-R lasts the life of the building (greater than 50 years)</p> |

PP-R WATER PIPE

Fine home furnishing · Forest green Polypropylene pipe fittings for hot and cold water



| Equal diameter pipe sleeve | |
|----------------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 576(24*24) |
| 25 | 288(12*24) |
| 32 | 144(6*24) |
| 40 | 300(15*20) |
| 50 | 200(10*20) |
| 63 | 120(6*20) |



| Positive Tee | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 192(8*24) |
| 25 | 96(4*24) |
| 32 | 48(2*24) |
| 40 | 138(6*23) |
| 50 | 72(4*18) |
| 63 | 42(2*21) |



| Reducing sleeve | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 25/20 | 288(12*24) |
| 32/20 | 192(8*24) |
| 32/25 | 144(6*24) |
| 40/20 | 400(20*20) |
| 40/25 | 400(20*20) |
| 40/32 | 345(15*23) |
| 50/20 | 255(15*17) |
| 50/25 | 255(15*17) |
| 50/32 | 300(15*20) |
| 50/40 | 200(10*20) |
| 63/20 | 180(6*30) |
| 63/25 | 180(6*30) |
| 63/32 | 180(6*30) |
| 63/40 | 180(6*30) |
| 63/50 | 120(6*20) |



| Reducing Tee | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 25/20 | 144(6*24) |
| 32/20 | 96(4*24) |
| 32/25 | 96(4*24) |
| 40/20 | 200(10*20) |
| 40/25 | 200(10*20) |
| 40/32 | 156(6*26) |
| 50/20 | 132(6*22) |
| 50/25 | 108(6*18) |
| 50/32 | 108(6*18) |
| 50/40 | 88(4*22) |
| 63/20 | 90(5*18) |
| 63/25 | 72(4*18) |
| 63/32 | 60(4*15) |
| 63/40 | 60(2*30) |
| 63/50 | 54(2*27) |



| Equal diameter 90° elbow | |
|--------------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 288(12*24) |
| 25 | 192(8*24) |
| 32 | 96(4*24) |
| 40 | 180(10*18) |
| 50 | 102(6*17) |
| 63 | 54(2*27) |



| 4-Way joints | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 72(6*12) |
| 25 | 72(6*12) |
| 32 | 20(2*10) |



| 90° Reducing Elbow | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 25/20 | 192(8*24) |
| 32/20 | 120(5*24) |
| 32/25 | 96(4*24) |



| Equal 45° Elbow | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 288(12*24) |
| 25 | 192(8*24) |
| 32 | 96(8*24) |
| 40 | 200(10*20) |
| 50 | 120(6*20) |
| 63 | 60(2*30) |



| Pipe Clamp | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 1440(60*24) |
| 25 | 1440(60*24) |
| 32 | 720(30*24) |



| Pipe Plug | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 576(24*24) |
| 25 | 576(24*24) |



| All plastic fitting | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 320(20*16) |
| 25 | 160(10*16) |
| 32 | 120(10*12) |
| 40 | 60(10*6) |
| 50 | 30(6*5) |
| 63 | 18(2*9) |



| Pipe Cap | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 960(40*24) |
| 25 | 576(24*24) |
| 32 | 288(12*24) |
| 40 | 460(20*23) |
| 50 | 260(10*26) |
| 63 | 150(10*15) |



| U-Type Bridge Elbow | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 192(8*24) |
| 25 | 72(3*24) |



| Corner Elbow | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 192(8*24) |
| 25 | 72(8*12) |



| S-Bend | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 192(8*24) |
| 25 | 96(3*24) |



| Tube Fittings | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20×1/2" f | 144(6*24) |
| 25×1/2" f | 144(6*24) |
| 25×3/4" f | 144(12*12) |
| 32×3/4" f | 144(12*12) |
| 32×1" f | 72(6*12) |
| 40×1-1/4" f | 16(4*4) |
| 50×1-1/2" f | 8(2*4) |
| 63×2" f | 6(1*6) |



| Female Tee | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20×1/2" f | 96(4*24) |
| 25×1/2" f | 96(4*24) |
| 25×3/4" f | 40(5*8) |
| 32×3/4" f | 25(5*5) |
| 32×1" f | 20(2*10) |



| 90° Female Elbow | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20×1/2" f | 144(6*24) |
| 25×1/2" f | 96(4*24) |
| 25×3/4" f | 144(6*24) |
| 32×1" f | 20(4*5) |
| 32×1/2" f | 20(4*5) |
| 20×1/2" Lf | 80(10*8) |



| Plastic Elbow | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 144(6*24) |
| 25 | 48(2*24) |
| 32 | 96(12*8) |



| Flow Tee | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20 | 96(4*24) |
| 25 | 48(4*24) |



| U-shaped return ring | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20x1/2f | 96(4*24) |
| 25x1/2f | 48(4*24) |



| External thread fitting | |
|-------------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20×1/2" m | 120(5*24) |
| 25×1/2" m | 96(4*24) |
| 25×3/4" m | 120(5*24) |
| 32×1" m | 48(2*24) |
| 40×1-1/4" m | 16(4*4) |
| 50×1-1/2" m | 8(2*4) |
| 63×2" m | 6(1*6) |



| Male Tee Fitting | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20×1/2" m | 72(6*12) |
| 25×1/2" m | 72(6*12) |
| 25×3/4" m | 30(5*6) |
| 32×3/4" m | 20(2*10) |
| 32×1" m | 12(2*6) |



| 90° Male Thread Elbow | |
|-----------------------|-------------------------|
| Product Specification | Each carton (pcs x box) |
| 20×1/2" m | 60(10*6) |
| 25×1/2" m | 50(5*10) |
| 25×3/4" m | 45(5*8) |
| 32×3/4" m | 30(6*5) |
| 32×1" m | 20(4*5) |
| 40×1-1/4" m | 16(4*4) |
| 50×1-1/2" m | 8(2*4) |
| 63×2" m | 4(1*4) |

PP-R WATER PIPE

Fine home furnishing · Forest green Polypropylene pipe fittings for hot and cold water



Double Connection Female Tee

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20*1/2f | 24(2*12) |
| 25*1/2f | 24(2*12) |



Double Female Elbow

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20*1/2"Lf | 36(3*12) |
| 25*1/2f | 24(2*12) |



Double Female Sleeve

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20*1/2f | 14(2*7) |



Inner threaded coupling

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20×1/2" f | 90(15*6) |
| 25×3/4" f | 60(10*6) |
| 32×1" f | 32(8*4) |
| 40×1-1/4" f | 20(4*5) |
| 50×1-1/2" f | 12(2*6) |
| 63×2" f | 7(1*7) |



Outer threaded coupling

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20×1/2" m | 144(6*24) |
| 25×3/4" m | 144(6*24) |
| 32×1" m | 72(3*24) |
| 40×1-1/4" m | 56(4*14) |
| 50×1-1/2" m | 36(2*18) |
| 63×2" m | 21(1*21) |



Ordinary shut-off valve (iron handwheel)

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20 | 48(2*24) |
| 25 | 24(1*24) |
| 32 | 24(1*24) |
| 40 | 36(2*18) |
| 50 | 22(1*22) |
| 63 | 14(1*14) |



Double activated ball valve (copper core)

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20/20 | 48(2*24) |
| 25/25 | 24(1*24) |
| 32/32 | 8(2*4) |
| 40/40 | 18(2*9) |
| 50/50 | 10(2*5) |
| 63/63 | 8(1*8) |



All-plastic copper core ball valve

| Product Specification | Each carton (pcs x box) |
|-----------------------|-------------------------|
| 20 | 30(5*6) |
| 25 | 20(5*4) |
| 32 | 12(3*4) |
| 40 | 8(4*2) |
| 50 | 5(1*5) |
| 63 | 3(1*3) |

WARNING NOTES



Temperature and Pressure:

Understand and comply with the temperature and pressure limitations of PP-R pipes, ensuring their use within the permitted range.



Connection and Maintenance:

Use specialized tools for cutting, heat fusion connections, etc., and ensure that the connections are secure and tightly sealed.



Transportation:

Handle with care during transportation to prevent pipe rupture or deformation.



Sun Exposure:

Avoid direct exposure of PP-R pipes to sunlight.



Protection:

Take precautions to protect the pipes during extreme usage, avoiding excessive bending and impacts.



Bending:

No flame heating when bending PP-R pipes.



Quality:

Ensure the selection of high-quality PP-R pipes that comply with standards.



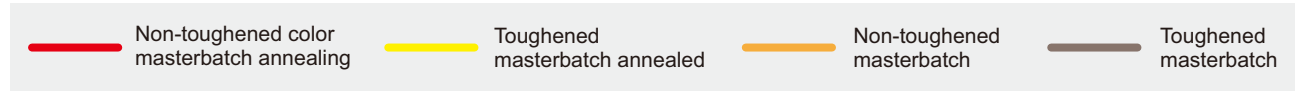
Storage:

Store pipes in the warehouse away from heat sources, with a maximum stacking height of 1.5 m.

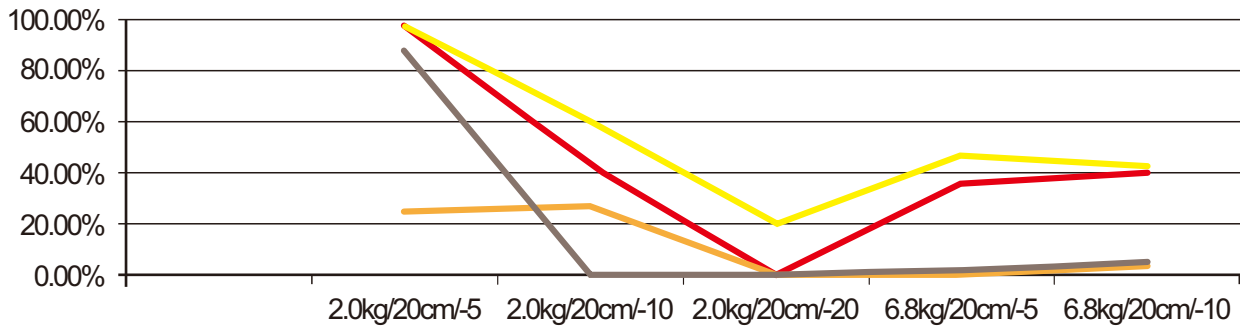
PP-R WATER PIPE

Fine home furnishing · Forest green Polypropylene pipe fittings for hot and cold water

PP-R toughening



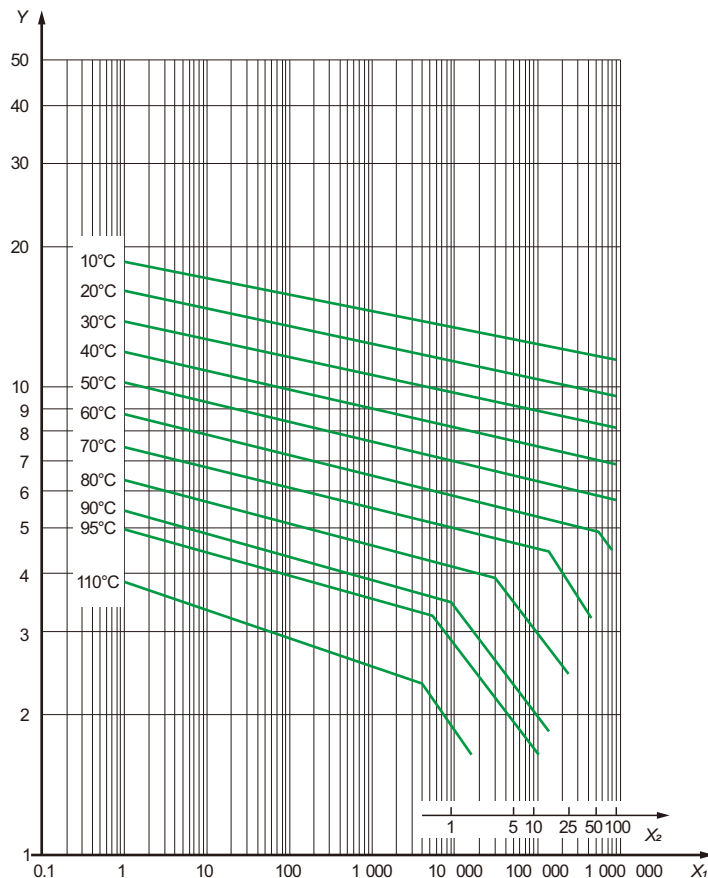
serviceability rate



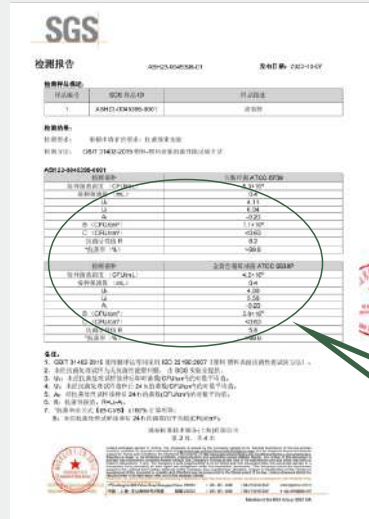
PP-R Predicted Strength Reference Curve

GB/T18742.1-2017

X_1 — time, t_1 , to destruction in hours (h)
 X_2 — time, t_2 , to destruction in years (y)
 Y — ring stress, σ , in megapascals (MPa)



AG Antimicrobial rate >99.9%



| ASH23-0045396-0001 | |
|---------------------------------|----------------------------|
| Test strains | Escherichia coli ATCC 8739 |
| Inoculum concentration (CFU/mL) | 5.3×10^8 |
| Inoculum volume (mL) | 0.4 |
| U_0 | 4.11 |
| U_k | 6.04 |
| A_t | -0.20 |
| B (CFU/cm ²) | 1.1×10^8 |
| C (CFU/cm ²) | <0.63 |
| Antimicrobial activity value R | 6.2 |
| *Antimicrobial rate (%) | >99.9 |

| Test strains | | Staphylococcus aureus ATCC6538P |
|---------------------------------|--|---------------------------------|
| Inoculum concentration (CFU/mL) | | 4.2×10^8 |
| Inoculum volume (mL) | | 0.4 |
| U_0 | | 4.00 |
| U_k | | 5.56 |
| A_t | | -0.20 |
| B (CFU/cm ²) | | 3.6×10^8 |
| C (CFU/cm ²) | | <0.63 |
| Antimicrobial activity value R | | 5.8 |
| *Antimicrobial rate (%) | | >99.9 |

Relationship of Series S to Maximum Allowable Working Pressure

When the total utilization (design) factor C of the piping system is 1.25

| Pipe Series S | S6.3 | S6 | S4 | S3.2 | S2.5 | S2 |
|--|------|------|-----|------|------|-----|
| Maximum Allowable Working Pressure (20°C, 50 years)MPa | 1.0 | 1.25 | 1.6 | 2.0 | 2.5 | 3.2 |

When the total utilization (design) factor C of the piping system is 1.5

| Pipe Series S | S6.3 | S6 | S4 | S3.2 | S2.5 | S2 |
|--|------|-----|------|------|------|-----|
| Maximum Allowable Working Pressure (20°C, 50 years)MPa | 0.8 | 1.0 | 1.25 | 1.6 | 2.0 | 2.5 |

PP-R WATER PIPE

Polypropylene pipe fittings for hot and cold water Copper inserts

Higher Pressure



EU standard CW617N copper is not only environmentally friendly, but after special treatment, it has better toughness than other materials under the same deformation. Applied to the pipeline can withstand greater water pressure, reducing the potential risk of copper cracking.

Performance-enhancing Design

Triple groove design:

Each groove has a dovetail groove with a 21° slope toward the copper body, which makes the insert more firmly bonded to the plastic and increases compression.



• Six-leg triangular structure:

The parallel sides between adjacent cams can achieve a larger force area in the tangential direction, allowing the product to withstand greater tangential torsion.

• Sectoral double-legged cams:

The edges between adjacent cams are parallel to each other to achieve a larger force area in the tangential direction so that the product can withstand a greater tangential moment.

• Through-hole grooves:

Increase axial force and make the insert more firmly bonded to the plastic.

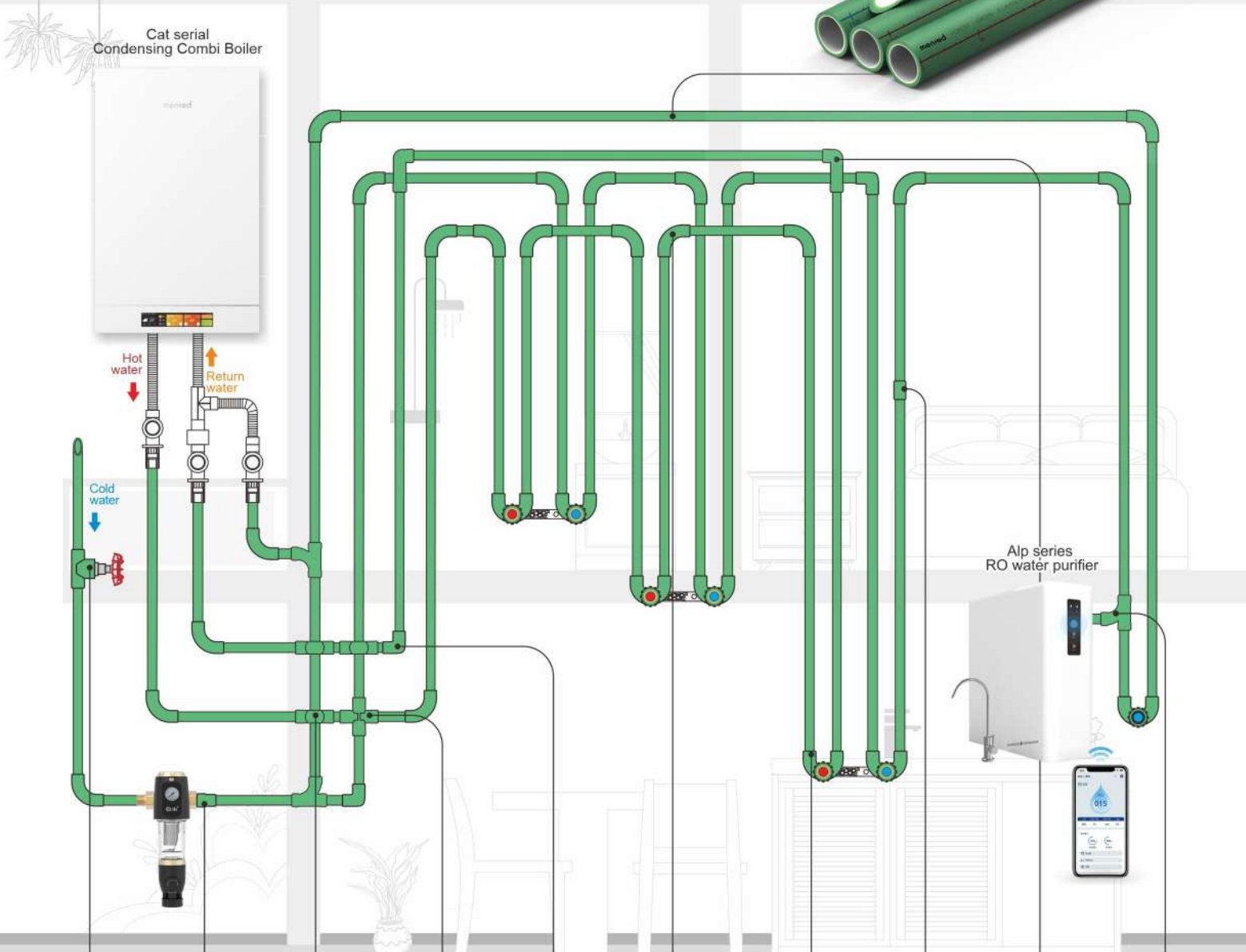
menred

PP-R Pipe and Fittings

Applications:

Hot and cold potable water piping in residential, industrial and public installations.

- Low Thermal Conductivity
- Long Service Life & Durability
- Ecological & Economic



Ordinary shut-off valve (iron handwheel)



U-Type Bridge Elbow



Equal diameter 90° elbow



U-shaped return ring



Corner Elbow



Tube Fittings



4-Way joints



Plastic Elbow



Equal diameter pipe sleeve



Flow Tee

Bathroom electric floor heating and deodorization system

