



**Submittal Data # 223 E**  
**UreconBlue® system**  
**for below grade applications**  
**for bell X spigot pipe**

Urecon's U.I.P.® factory insulation piping process and related ISO-9000 quality control procedures assure you of the highest quality product on the market today. This unique, time proven, void free process allows us to visually inspect the urethane foam insulation prior to jacket application. The blue UV inhibited polyethylene jacket protects the system once the "U.I.P."® foam has cured.

**Application:**

Urecon's standard chilled water "U.I.P."® pre-insulated piping system is suitable for above and below ground water lines to 86°C (185°F).

**Core Pipe:**

All types of bell X spigot pipe may be factory insulated with the "U.I.P."® process; refer to the attached pipe manufacturer's data sheet for information on the core pipe(s) chosen for this project.

**Pipe Preparation:**

Pipe shall be cleaned of surface dust and dirt to insure a positive bond of the foam to the entire pipe surface.

**Insulation:**

- Material, polyurethane foam, factory applied.
- Thickness: nominal 1 in to 1.5 in, depending on diameter (other thicknesses available upon request).
- Density: (ASTM D 1622) 35 to 46 kg/m<sup>3</sup> (2.2 to 3.0 lbs/ft<sup>3</sup>).
- Closed cell content: (ASTM D 2856) 90%, minimum.
- Water absorption: (ASTM D 2842) 4.0% by volume.
- Thermal conductivity: (ASTM C518) 0,020 to 0,026 W/m<sup>0</sup>C (0.14 to 0.17 Btu • in/ft<sup>2</sup> • hr • °F).

**System Properties:**

- b) Temperature limitations:
  - in service, -45<sup>0</sup> to 86<sup>0</sup>C (-49<sup>0</sup> to 185<sup>0</sup>F)

- System compressive strength: (modified ASTM D 1621 with 0.42mm (15 mil) jacket) approximately 414 to 552 kPa (60-80 lbs/in<sup>2</sup>), varies with pipe diameter.

**Outer Jacket on Pipe Insulation:**

The outer protective jacket shall consist of custom blended blue polyethylene, 0.42mm (15 mils) thick, UV inhibited factory applied. The jacket shall have a modified butyl rubber adhesive to ensure positive adhesion to the foam insulation and shall be applied hot to ensure a waterproof bond throughout its entire length.

**Outer Jacket Characteristics:**

- jacket material: blue (UV inhibited) polyethylene
- sealant: butyl rubber, resin
- jacket thickness: 0.42 mm (15 mils)
- minimum elongation: (ASTM D 1000) 300%, 6 month test
- tensile strength: (ASTM D-1000) 8,93 kg/cm (38 lbs/in)

**Bell X Spigot Joints:**

The pipe is insulated to the end of the bell and provided with the appropriate cut-backs to allow for insertion of the spigot into the bell in the field. Joints are sealed by means of the supplied blue PE hand roll tape overlapping the adjacent jacket by approximately 75 mm (3 in).

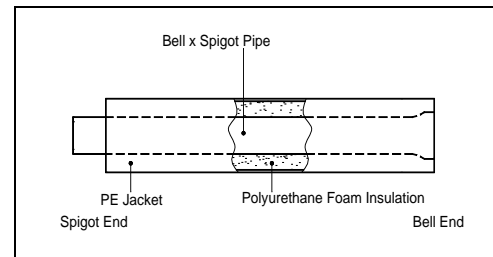
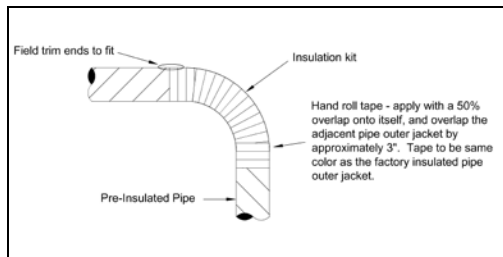
**Fittings:**

May be supplied factory insulated if the fitting is large enough or shall consist of rigid polyisocyanurate or urethane foam insulation half shells for field installation. These kits are supplied with blue PE hand roll tape for field installation over the fitting and the adjacent pipe jackets by approximately 75 mm (3 in) as per illustration below.

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Nominal Standard Pipe Size	Foam OD**
1/2", 3/4" or 1"	3.25"
1 1/4" or 1 1/2"	4"
2"	4.63"
2 1/2"	5.13"
3"	5.75"
4"	7"
5"	8"
6"	9"
8"	11"
10"	14"
12"	16"
14"	18.5"
16"	20.50"

\*\*other thicknesses upon request



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