

## DuroMaxx® Specification Sheet

### Scope

This specification describes DuroMaxx® pipe for use such as storm sewers, sanitary sewers, industrial waste applications, drainage pipes, underground detention, infiltration, cistern or rainwater harvesting systems in 30" (750 mm) through 120" (3000 mm) nominal diameters.

### Description

DuroMaxx is a reinforced polyethylene pipe with a smooth waterway wall and exterior profile that is reinforced with high strength galvanized steel ribs. The continuous reinforcing ribs are completely encased within the polyethylene profile. DuroMaxx is manufactured using a helical winding process that results in a continuously fusion welded lap seam. The pipe profile is manufactured using a high quality stress-rated thermoplastic meeting the requirements of ASTM F2562 "Standard Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage" or AASHTO Designation MP-20. For the purpose of hydraulic design, the recommended Manning's "n" value shall be 0.012 for pipe diameters included within this specification.

### Material Properties

Virgin high density polyethylene stress-rated resins are used to manufacture DuroMaxx pipe and complimentary fabricated fittings. Resins shall conform to the minimum requirements of cell classification 345464C as defined and described in the latest version of ASTM D3350 "Standard Specification for Polyethylene Plastics Pipe and Fittings Materials".

### Joint Performance

Pipe lengths shall be joined on site using coupling bands, bell & spigots or ElectroFusion couplers especially designed for DuroMaxx pipe. Joints shall meet one of the performance levels as required and specified:

- **Soil Tight Joints** (30" – 120") shall be plain ended DuroMaxx pipe with Aluminized Type 2 (or optional Polymeric coated) CMP coupling bands and elastomeric gaskets (see Standard Drawings 1012802).
- **Low Head (LH) Joints** (30" – 84") shall be gasketed, stress-rated high density polyethylene bell and spigot joints (meeting the requirements set forth in the above Material Properties paragraph) that have been laboratory tested to 3 psi when tested in accordance with ASTM D3212 "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals" (see Standard Drawing 1012803).
- **High Performance (HP) Joints** (30" – 84") shall be gasketed, bell and spigot joints where both the bell and spigot are reinforced with steel that is fully encased in stress-rated high density polyethylene (meeting the requirements set forth in the above Material Properties paragraph) and that have been laboratory tested to 15 psi when tested in accordance with ASTM D3212 "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals" (see Standard Drawing 1012804).
- **Welded Joints** (36" – 120") shall utilize plain ended DuroMaxx pipe welded together utilizing exclusive pressure testable ElectroFusion (EF) couplers or extrusion welded (WC) couplers. The welded connections provide a true in-field watertight system assured by the pressure testable welded sleeves at each welded connection. The field installed welded joints shall remain watertight up to a test pressure of 30 psi (see Standard Drawing 1012805).

### Fittings

All fabricated fittings and couplings supplied by the manufacturer shall be constructed to ensure no loss of structural integrity or joint tightness at welded seams and joints. Only those fittings supplied by or recommended by the manufacturer shall be used.

**Installation**

Installation shall be in accordance with ASTM D2321 “Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications” along with product-specific recommendations contained in Contech Installation Guidelines for DuroMaxx pipe, available from local Contech representatives or from [www.contech-cpi.com](http://www.contech-cpi.com).

**Pipe Dimensions and Cover Limits**

Nominal Pipe Size	Outside Diameter	Unit Weight**	Minimum Waterway Wall Thickness (t <sub>1</sub> )		Minimum Cover***		Maximum Cover	
			in.	[mm]	ft.	[m]	ft.	[m]
30	30.9 [785]	15.5	.082	[2.08]	1	[.305]	50	[15.2]
36	37.1 [942]	20.8	.082	[2.08]	1	[.305]	50	[15.2]
42	43.2 [1097]	26.5	.082	[2.08]	1	[.305]	50	[15.2]
48	49.5 [1257]	29.1	.130	[3.30]	1	[.305]	30	[9.1]
54	55.5 [1410]	34.7	.130	[3.30]	1	[.305]	30	[9.1]
60	61.4 [1560]	41.6	.130	[3.30]	1	[.305]	30	[9.1]
66	67.8 [1722]	56.9	.220	[5.58]	1.5	[.457]	30	[9.1]
72	74.1 [1882]	65.6	.220	[5.58]	1.5	[.457]	30	[9.1]
84	85.9 [2182]	76.3	.220	[5.58]	2	[.610]	30	[9.1]
96	98.3 [2497]	87.0	.220	[5.58]	2	[.610]	30	[9.1]
108	111.3 [2827]	99.7	.220	[5.58]	2.5	[.762]	25	[7.6]
120	121.9 [3097]	109.0	.220	[5.58]	3	[.914]	25	[7.6]

\* 84", 96", 108" and 120" min. pipe stiffness is not currently defined in ASTM Specification F2562 for Class 1 pipe. Contech has developed the required minimum pipe stiffness for these pipe diameters.  
 \*\* Approximate weights. Actual weight will vary with length and joint type.

**The Contech Environmental Commitment**

Contech is an environmentally conscious company committed to shaping the future of green building and design. DuroMaxx is Contech’s newest contribution to our ecofriendly portfolio of civil engineering solutions. Starting with the manufacturing process, DuroMaxx consumes less than 35% of natural resources to produce AASHTO M294 HDPE pipe. The green design continues with DuroMaxx’s steel reinforced ribs which are made of recycled steel in content levels ranging from 55-80%. Plus, when utilized appropriately, it can contribute to a variety of the U.S. Green Building Council’s LEED credits in the categories for sustainable sites, water efficiency and landscaping, and materials and resources.

