### TECHNICAL BULLETIN



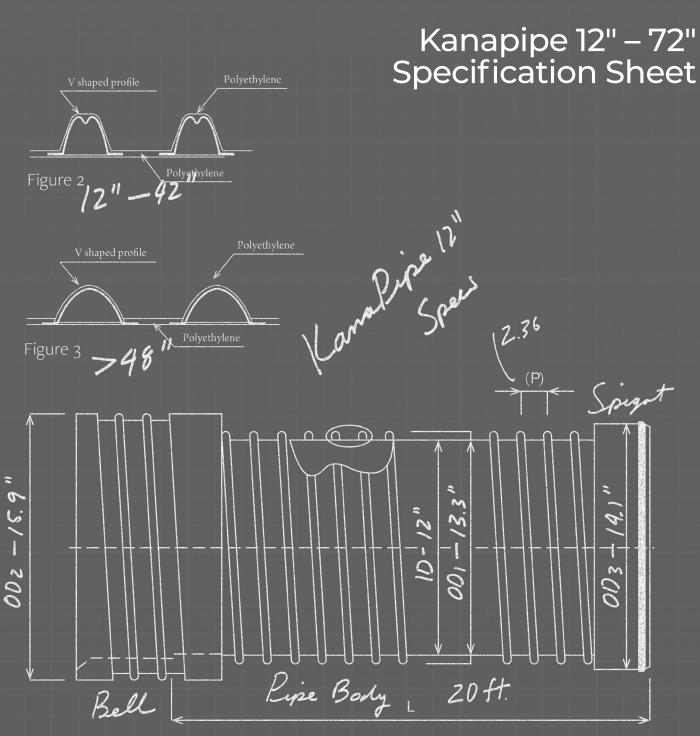


Figure 1

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#### Scope

This specification describes Kanapipe™ Steel Reinforced Polyethylene SRPE pipe 12- through 72-inch (300 to 1800 mm) for use such as storm sewers, sanitary sewers, drainage pipes, underground stormwater detention/retention, infiltration, industrial waste applications or rainwater harvesting systems.

#### **Pipe Description**

Kanapipe is a reinforced high-density polyethylene pipe with a smooth interior waterway and a corrugated exterior profile which is reinforced with high strength galvanized steel. The continuous reinforcing steel profile shall be completely encapsulated within the high-density polyethylene corrugation. A continuous extrusion process is used to join the reinforcing corrugations on the outside of the pipe. The pipe shall be Kanapipe Type IV (V-Shaped profile) manufactured by Kanaflex Corporation.

#### Joint Description/Performance

Pipe shall be joined using a bell and spigot joint meeting the requirements of ASTM Specification F477. The joint shall be watertight when tested in accordance with the requirements of ASTM D3212, with the addition of a 20 psi pressure requirement. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gaskets remain free from debris.

Pipes can also be requested plain end and with then be joined in the field using coupling bands designed for Kanaflex steel reinforced polyethylene pipes.

#### MATERIAL PROPERTIES

#### **Polyethylene Materials**

Polyethylene compounds used to manufacture Kanapipe shall meet and exceed the requirements of PE80 or having a cell classification of 333474C as defined and described in ASTM Specification D3350.

Slow crack growth resistance of the polyethylene compound shall be determined by testing in accordance with ASTM Test Method F2136. The applied stress shall be 600 psi (4100 kPa). The test specimens must exceed 41 h with no failures. Testing shall be done on polyethylene material taken from the finished pipe.

Carbon black content of polyethylene shall be a minimum of 2.0% to a maximum of 3.0% of the total of the polyethylene compound.

#### **Steel Materials**

The minimum thickness of the steel shall meet the requirements listed in ASTM Standard F2435. The steel substrate shall conform to ASTM Specification A1008/ A1008M or A653/A653M, and the minimum yield strength

of the steel shall not be less than 22.66 ksi (170 MPa). The zinc-galvanized coating shall have a minimum zinc coating designation of 20Z (intermediate coating) as defined in ASTM Specification A591/A591M.

The steel material shall be a maximum of 75% (+or-2%) of the total weight of the pipe. The steel material shall be fully encapsulated by the polyethylene material with a minimum thickness of the polyethylene at its thinnest point of 0.012 in. (0.3 mm).

#### Bond Between HDPE and Steel

The mechanical bond between steel and high-density polyethylene shall be greater than the tensile strength of the polyethylene resin required in ASTM F2435. It shall not be possible to separate any two layers with a probe or with the point of a knife blade so that the layers separate cleanly, or the probe or knife moves freely between the layers. There shall be no separation of the polyethylene from the steel reinforcing profile when the pipe is deflected to 40% when tested in accordance with ASTM D2412.

#### **Rework Material**

Rework material is not to be used in the manufacture of this product.

#### **Gaskets Material**

Elastomeric gaskets shall comply with the requirements of ASTM Specification F477.

#### Lubricant

The lubricant used for the assembly of the gasketed joints shall have no detrimental effect on the gasket or pipe.

#### Length

Kanapipe is available in standard lengths of 20' in bell and spigot configuration, can also be made in custom lengths up to 40'. Note that maximum available length for 72" pipe is 25'.

#### Fittings

Only those fittings supplied by or recommended by the manufacturer shall be used.

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#### **Pipe Stiffness**

Minimum pipe stiffness shall be as shown in ASTM F2435 at 5% deflection when tested in accordance with ASTM D2412.

#### Perforations

Drainage Pipe – When perforations are necessary they shall be cleanly cut and uniformly spaced along the length and circumference of the pipe in a size, shape and pattern suited to the needs of the user. Perforations shall be in the valley portion of the pipe. The reinforcing steel material shall not be exposed by these perforations.

#### Installation

Installation shall be in accordance with ASTM D2321 and Kanaflex recommended installation guidelines, available from your local Kanaflex representative or from www.kanaflexcorp.com.

#### Build America, Buy America (BABA)

Kanapipe SRPE pipe, manufactured in accordance with ASTM F2435, complies with the requirements in the Build America, Buy America (BABA) Act.

### **Pipe Dimensions**

Nominal Diameter		Pipe Body						Pipe Joint	
		ID		OD,		Pitch		OD <sub>2</sub>	
inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
12	300	12.0	305	13.3	338	2.36	60	15.0	380
15	375	15.0	381	16.3	413	2.36	60	18.1	460
18	450	18.0	457	19.3	489	2.44	62	21.3	540
24	600	24.0	610	25.7	653	2.76	70	27.6	700
30	750	30.0	762	32.2	817	3.54	90	34.5	875
36	900	36.0	915	38.2	970	3.94	100	40.6	1,030
42	1,050	42.0	1,067	44.4	1,128	3.94	100	46.9	1,190
48	1,200	48.0	1,220	52.0	1,320	6.30	160	57.7	1,465
60	1,500	60.0	1,524	65.2	1,656	7.68	195	70.9	1,801
72	1,800	72.0	1,829	77.2	1,961	7.68	195	_	_



#### **HEADQUARTERS**

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**PIPE PLANT** 875 Woodlands Pkwy Vernon Hills, IL 60061 847.276.2235

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