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PRODUCT EVALUATION

IMR Report Number 200607918

PO Number
006529

Date Received
August 31, 2006

Description
Flex Drain Tubing

Sample ID
Solid
Perforated

Specification
CPPA Standard
Specification (100-97)

SUMMARY

The samples **meet** the stiffness and flattening requirements of CPPA Standard Specification (100-97) for a Type C corrugated polyethylene (PE) pipe for storm sewer applications.

The results are reported on the following page.

Reviewed by



David Feavearyear
Mechanical Engineer

Reviewed by



Jim Andrews, Manager
Mechanical Testing & Machine Shop



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STIFFNESS

Sample	Seam Orientation	Max Load (lbs)	Deflection at Max Load (in)	Load @ 5% (lbs)	Length (in)	Deflection @ 5% (in)	Stiffness ¹ (pii)	Stiffness ¹ (kPa)
Solid 1	Top	224	0.653	124.4	12	0.202	51.2	353
Solid 2	Top	216	0.618	121.1	12	0.202	49.9	344
Solid 3	Side	194	0.557	121.0	12	0.202	49.8	344
Ave	---	---	---	---	---	---	50.3	347
Std	---	---	---	---	---	---	0.8	5
Spec.	---	---	---	---	---	---	35 Min.	240 Min.

Sample	Seam Orientation	Max Load (lbs)	Deflection at Max Load (in)	Load @ 5% (lbs)	Length (in)	Deflection @ 5% (in)	Stiffness ¹ (pii)	Stiffness ¹ (kPa)
Perf 1	Side	187	0.602	109.7	12	0.202	45.2	312
Perf 2	Top	162	0.444	107.6	12	0.202	44.3	306
Perf 3	Top	148	0.766	99.1	12	0.202	40.8	281
Ave	---	---	---	---	---	---	43.4	300
Std	---	---	---	---	---	---	2.3	16
Spec.	---	---	---	---	---	---	35 Min.	240 Min.

¹Minimum pipe stiffness for Type C pipe in sizes 250 mm (10”) and small shall be 240 kPa (35 pii).
 Crosshead speed was 0.5 in./min.
 Method in accordance with ASTM D 2412-96a.

FLATTENING

Sample	Seam Orientation	Deflection (%)	Visual
Solid 1	Top	20	Pass
Solid 2	Top	20	Pass
Solid 3	Side	20	Pass
Perf 1	Side	20	Pass
Perf 2	Top	20	Pass
Perf 3	Top	20	Pass
Spec.	---	---	No splitting, cracking, breaking, or separation of ribs, seams, or corrugations is observed under normal light with the unaided eye.

Crosshead speed was 0.5 in./min.
 Method in accordance with ASTM D 2412-96a.