

April 2, 2004

TEST REPORT

Send To 0D470
PERMA-LINER INDUSTRIES, INC.
6196 126TH AVENUE N.
LARGO FL 33773
Attn: MR. GERALD D'HULSTER

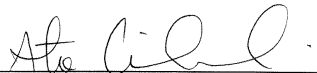
Customer 0D470
PERMA-LINER INDUSTRIES, INC.
6196 126TH AVENUE N.
LARGO FL 33773
Attn: MR. GERALD D'HULSTER

Plant 0D471
PERMA-LINER INDUSTRIES, INC.
6196 126TH AVENUE N.
LARGO FL 33773
Attn: MR. GERALD D'HULSTER

Product: CIPP 4" Sewer Pipe
Test Type: AA - Annual Collection

The enclosed report details the results of the testing performed by NSF on your product(s). Your program representative will contact you if there are any remaining issues concerning the evaluation/certification of this product.

Please contact your representative if you have any questions. We thank you for having your product(s) tested by NSF.

Reviewer: 
Atabek Ciechanowski - Lead Engineer

Status: **Pass**

CC : 010 - Plumbing and Related Programs
Kenneth A. Robertson
01 - Domestic

PA Project : 60727
PA Job : PL01

Tracking ID: PL03326
 Project #: 010
 Region: 01
 NSF Field Representative: Kenneth A. Robertson

Lab Number: S402171729
Description: CIPP 4" Sewer Pipe
Sampled: NOV 24, 2003
Received: FEB 12, 2004

Collection: Annual Testing
 Imprint Trade Name: Fabricated 9/18/03
 Performance Standard: F1216
 Performance Standard Year: na
 Size of Product: 4"

Parameter	Result	Units	Entered	Reporting Limit	P/F
Flex Modulus					
Specimens conditioned for	40	hours	02-APR-04		
Specimens conditioned at	73	degrees F	02-APR-04		
Relative humidity	50	%	02-APR-04		
Test temperature Required	73	degrees F	02-APR-04		
Test temperature Actual	73	degrees F	02-APR-04		
Required crosshead speed	0.33	in/min	02-APR-04		
Actual crosshead speed	0.33	in/min	02-APR-04		
Deflection	<5	%	02-APR-04		
Specimen 1	391000	psi	02-APR-04		
Specimen 2	389000	psi	02-APR-04		
Specimen 3	426000	psi	02-APR-04		
Specimen 4	437000	psi	02-APR-04		
Specimen 5	370000	psi	02-APR-04		
Required Average Modulus (minimum)	250000 psi		02-APR-04		
Actual Average Modulus	402000	psi	02-APR-04		
Flex Modulus Test			02-APR-04		Pass

Note:

Span = 6.1".

Flexural Strength Test

Specimens conditioned for	40	hours	02-APR-04		
Specimens conditioned at	73	degrees F	02-APR-04		
Relative Humidity	50	percent	02-APR-04		
Test Temperature	73	degrees F	02-APR-04		
Cross Head Speed	0.33	in/min.	02-APR-04		
Specimen 1 Flexural Strength	8370	psi	02-APR-04		
Specimen 2 Flexural Strength	9070	psi	02-APR-04		
Specimen 3 Flexural Strength	9030	psi	02-APR-04		
Specimen 4 Flexural Strength	9040	psi	02-APR-04		
Specimen 5 Flexural Strength	9010	psi	02-APR-04		
Average Flexural Strength	8900	psi	02-APR-04		
Required Flexural Strength	4500	psi	02-APR-04		
Flexural Strength Test			02-APR-04		Pass

Note:

Span = 6.1".

Strength, Tensile

Parameter	Result	Units	Entered	Reporting Limit	P/F
Specimens conditioned for	40	hours	02-APR-04		
Specimens conditioned at	73	degrees F	02-APR-04		
Relative humidity	50	%	02-APR-04		
Test Temperature	73	degrees F	02-APR-04		
Actual Crosshead Speed	0.2	in/min.	02-APR-04		
Required Crosshead Speed	0.2	in/min.	02-APR-04		
Specimen 1: Tensile Strength	6190	psi	02-APR-04		
Specimen 2: Tensile Strength	6040	psi	02-APR-04		
Specimen 3: Tensile Strength	6080	psi	02-APR-04		
Specimen 4: Tensile Strength	5600	psi	02-APR-04		
Specimen 5: Tensile Strength	5720	psi	02-APR-04		
Req'd Average Tensile Strength (minimum)	3000 psi		02-APR-04		
Actual Average Tensile Strength	5920	psi	02-APR-04		
Tensile Strength Test			02-APR-04		Pass

References to Testing Procedures:

<u>Parameter/Test Description</u>	<u>NSF Reference</u>
Flex Modulus	- P382
Flexural Strength Test	- P383C
Strength, Tensile	- P386

ND = Not Detectable at Reporting Limit.