



CONSTRUCTION MATERIALS

LABORATORY TEST RESULTS

TECHNOLOGIES

Report for: Gardner Gibson
4146 E. 7th Avenue
Tampa, FL 33605

Attention: Matt Mullins

Product Name(s): APOC Tuff-Felt 26	Manufacturer: Gardner Gibson
PRI-CMT Project No.: GGI-207-02-01	Source: Gardner Gibson
Date Received: January 31, 2018	Dates Tested: Feb. 26, 2018 – Mar. 5, 2018

Purpose: Evaluate *APOC Tuff-Felt 26* for compliance with the physical properties of **ASTM D 226 Asphalt-Saturated Felt Used in Roofing and Waterproofing, Type II.**

Test Methods: Testing was completed as described in ASTM D 226-09: *Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing*. Test methods assigned or referenced include ASTM D 70: *Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)*; ASTM D 146: *Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing*; and ASTM D 6136: *Standard Test Method for Kerosine Number of Unsaturated (Dry) Felt by Vacuum Method*.

Sampling: Product samples were provided by Gardner Gibson in Tampa, FL

GGI-207-02-01

The test results, opinions, or interpretations are based on the material supplied by the client. This report is for the exclusive use of stated client. No reproduction or facsimile in any form can be made without the client's permission. This report shall not be reproduced except in full without the written approval of this laboratory. PRI Construction Materials Technologies LLC assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.

Results: ASTM D 226

Property	Test Method	Result	Requirement	
			Type I	Type II
Physical Requirements				
Breaking Strength (lbf/in-width) 20 specimens; 1" x 6" x thickness; Cond. 2h @ 73.4±3.6°F & 50±5%RH; Test @ 73.4±3.6°F; Rate=2in/min	ASTM D 146			
Longitudinal (with fiber grain)		69	≥ 30	≥ 40
Transverse (across fiber grain)		32	≥ 15	≥ 20
Pliability [Pass/Fail] 10 specimens; 1" x 8" x thickness; Cond. 10-15min in water @ 77±1.8°F; Test 90° around ½" radius in 2s	ASTM D 146		½" radius	¾" radius
Longitudinal (with fiber grain)		Pass	No Failures	No Failures
Transverse (across fiber grain)		Pass	No Failures	No Failures
Loss on Heating (weight %) 2 specimens; 12" x 6" x thickness; Test Cond. 221±5°F for 5h±3min	ASTM D 146	1	≤ 4	≤ 4
Dimensions and Masses				
Width of Roll (in)	ASTM D 146	36	36±1/4	36±1/4
Area, min (ft²)	ASTM D 146	217	432	216
Moisture at Point of Manufacture (%)	ASTM D 146	NT	≤ 4.3	≤ 4.1
As Received¹		1.0	≤ 4.3	≤ 4.1
Net Mass of Saturated Felt (lb/100ft²)	ASTM D 146	26	≥ 11.5	≥ 26
Mass of Saturant (lb/100ft²)	ASTM D 146	15.0	≥ 6.2	≥ 15.0
Mass Ratio of Saturant to Desaturated Felt	ASTM D 226	1.5	≥ 1.2	≥ 1.5
Saturation Efficiency (%)	ASTM D 226	71	≥ 70	...
Mass of Desaturated Felt (lb/100ft²)	ASTM D 146	10.0	≥ 5.2	≥ 10.0
Ash (%)	ASTM D 146	9.0	≤ 10.0	≤ 10.0

Continued on Following Page

GGI-207-02-01

The test results, opinions, or interpretations are based on the material supplied by the client. This report is for the exclusive use of stated client. No reproduction or facsimile in any form can be made without the client's permission. This report shall not be reproduced except in full without the written approval of this laboratory. PRI Construction Materials Technologies LLC assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.

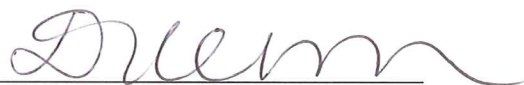
Property	Test Method	Result	Requirement	
			Type I	Type II
Perforated Felt (in ²)	ASTM D 226	NA	≤ 0.05	...
Average Venting Area (%)	ASTM D 226	NA	≥ 0.1	...
Other				
Unrolling @ 50°F and 140°F [Pass/Fail]	ASTM D 226	Pass	No Damage	No Damage

Note(s): 1- Moisture (As Received) was utilized in lieu of Moisture at Point of Manufacture;
NT- Not Tested;
NA- Not Applicable

Statement of Compliance:

The product was tested has demonstrated compliance with the physical requirements of Type II prescribed in **ASTM D 226-09: Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing**.

Signed: 
Jason Simmons
Director

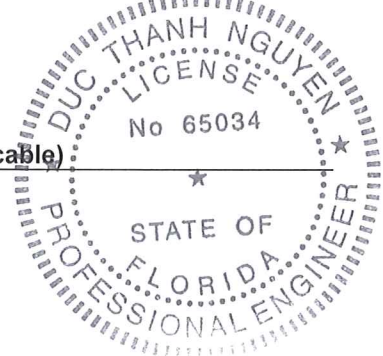
Signed: 
Duc T. Nguyen
Florida Registered Professional Engineer
PE No.: 65034

Date: 3/9/2018

Date: 3/09/2018

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	03/08/2018	3	NA



END OF REPORT

GGI-207-02-01

The test results, opinions, or interpretations are based on the material supplied by the client. This report is for the exclusive use of stated client. No reproduction or facsimile in any form can be made without the client's permission. This report shall not be reproduced except in full without the written approval of this laboratory. PRI Construction Materials Technologies LLC assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.