

## Technical Data Sheet

All national, state, and local building code requirements must be followed and where they are more stringent than the JamesHardie® installation requirements, state and local requirements will take precedence.

### General Description

HardieFloor® Wet Area Solution is a high grade combination fiber-cement structural subfloor and underlayment manufactured by James Hardie Building Products. All James Hardie Manufacturing Plants are third party quality assurance certified by Intertek Testing Services.

### Product Dimension

Length: 8 feet  
Width: 2 feet  
Thickness: 23/32 inch

### Product Composition

HardieFloor® Wet Area Solution is a fiber-cement flat sheet compliant to ASTM C 1288.

### Code Compliance

HardieFloor® Wet Area Solution complies with ICC-ES AC308 Acceptance Criteria on Fiber-reinforced Cement Sheet Structural Floor Sheathing.

AC308 testing is summarized below:

- ASTM C 1288-01 Standard Specification for Discrete Non-asbestos Fiber-Cement Interior Substrate Sheets Grade II as shown in Design Table 1,
  - Recognized as a base for tile in wet areas per the 2006 International Building Code® (IBC) Section 2509.2,
  - Recognized as a base for tile in wet areas per the 2006 International Residential Code® (IRC) Section R702.4.2,
- ASTM D 1037-06a Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials, Fastener Withdrawal Loads and Lateral Loads are listed in Design Table 2,

ASTM E 661-03 Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads, Concentrated Loads are listed in Design Table 3,  
PS 2-04 Performance Standard for Wood-Based Structural-Use Panels, Uniform Loads are listed in Design Table 4.

HardieFloor™ Wet Area Solution is allowed for interior residential uses, Minimum Uniformly Distributed Live Loads can be found in Table 1607.1 of the 2006 International Building Code® or Table R301.5 of the 2006 International Residential Code®. The allowable uniform loads for HardieFloor® Wet Area Solution applied over joists spaced at 16 inch, 19.2 inch, and 24 inch on center are shown in Design Table 5. HardieFloor® Wet Area Solution shall be installed in accordance with this sheet and the manufacturer's published Installation Instructions, for a copy contact your local HardieFloor® Wet Area Solution Sales Representative or [www.jameshardie.com](http://www.jameshardie.com). All national, state, and local building code requirements must be followed and where they are more stringent than the HardieFloor® Wet Area Solution installation instructions, state and local requirements will take precedence.

The Building Official reserves the right to approve alternate materials, design and methods of construction based on research reports and tests  
- 2006 International Building Code® Section 104.11,  
- 2006 International Residential Code® Section R104.11,

Test reports can be furnished to the Building Official upon request, contact your local HardieFloor® Wet Area Solutions Sales Representative.

Product Sampled and Tested by Intertek Testing Services. [www.intertek-etlsemko.com](http://www.intertek-etlsemko.com)

Design Table 1, HardieFloor® Wet Area Solution ASTM C 1288 Physical Properties and Supplementary Requirements

Property	Test Method		Requirement	Pass/Fail
Dimensional Tolerances	ASTM C1185	Length, in.	± 0.25	Pass
	ASTM C1185	Width, in.	± 0.25	Pass
	ASTM C1185	Thickness, in.	± 0.06	Pass
	ASTM C1185	Squareness, in.	± 0.25	Pass
	ASTM C1185	Edge Straightness, in.	± 0.06	Pass
Flexural Strength	ASTM C1185	Equilibrium conditioned, psi	≥ 1450	Pass
	ASTM C1185	Wet conditioned, psi	≥ 1015	Pass
Modulus of Elasticity	ASTM C1185	Equilibrium conditioned, psi	As reported	1029122
	ASTM C1185	Wet conditioned, psi	As reported	575976
Density	ASTM C1185	lbs per cubic ft	As reported	68.3
Moisture Movement, % linear change	ASTM C1185	Machine direction, %	≤ 0.07	Pass
	ASTM C1185	Cross direction, %	≤ 0.07	Pass
Moisture Content, %	ASTM C1185	Observation	As reported	7.5
Water Tightness	ASTM C1185	Observation	No drop formation	Pass
Warm Water Resistance	ASTM C1185	Strength retention, %	≥ 80	Pass
	ASTM C1185	Observation	No visible cracks or structural alteration	Pass
7-day Shear Bond Strength				
Dry-Set Portland Cement Mortar	ANSI A118.1	360 lbs/min load rate, psi	≥ 50	Pass
	ANSI A118.1	2400 lbs/min load rate, psi	≥ 50	Pass
Latex Portland Cement Mortar	ANSI A118.4	360 lbs/min load rate, psi	≥ 50	Pass
	ANSI A118.4	2400 lbs/min load rate, psi	≥ 50	Pass
Fastener Pull Through Load				
11 ga roofing nail, 0.375 inch head diameter	ASTM C1288	Saturated, lbs	≥ 90	Pass



Warnock Hersey  
Certification  
AUTHORIZATION TO  
MARK

LISTED

Client #  
8517, 17832



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Design Table 2, HardieFloor® Wet Area Solution ASTM D 1037 Fastener Tests

Property	Test Method		Requirement	Pass/Fail
<b>Fastener Pull Through Load</b>				
6d common, 2 in. long, ring shank nail	ASTM D1037	Dry, lbs	≥ 20	Pass
	ASTM D1037	Wet/redry, lbs	≥ 15	Pass
8d common, 2-1/2 in. long, ring shank nail	ASTM D1037	Dry, lbs	≥ 20	Pass
	ASTM D1037	Wet/redry, lbs	≥ 15	Pass
2-1/2 in. long, Trapease® deck screw 0.143 in. shank X 0.313 in. head diameter	ASTM D1037	Dry, lbs	≥ 20	Pass
	ASTM D1037	Wet/redry, lbs	≥ 15	Pass
<b>Fastener Withdrawal Load</b>				
6d common, 2 in. long, ring shank nail	ASTM D1037	Dry, lbs	≥ 20	Pass
	ASTM D1037	Wet/redry, lbs	≥ 15	Pass
8d common, 2-1/2 in. long, ring shank nail	ASTM D1037	Dry, lbs	≥ 20	Pass
	ASTM D1037	Wet/redry, lbs	≥ 15	Pass
2-1/2 in. long, Trapease® deck screw 0.143 in. shank X 0.313 in. head diameter	ASTM D1037	Dry, lbs	≥ 20	Pass
	ASTM D1037	Wet/redry, lbs	≥ 15	Pass
<b>Fastener Lateral Load</b>				
6d common, 2 in. long, ring shank nail	ASTM D1037	Dry, lbs	≥ 210	Pass
	ASTM D1037	Wet/redry, lbs	≥ 160	Pass
8d common, 2-1/2 in. long, ring shank nail	ASTM D1037	Dry, lbs	≥ 210	Pass
	ASTM D1037	Wet/redry, lbs	≥ 160	Pass
2-1/2 in. long, Trapease® deck screw 0.143 in. shank X 0.313 in. head diameter	ASTM D1037	Dry, lbs	≥ 210	Pass
	ASTM D1037	Wet/redry, lbs	≥ 160	Pass

Design Table 3, HardieFloor® Wet Area Solution ASTM E 661 Concentrated Loads

Property	Test Method		Requirement	Pass/Fail
<b>Concentrated Static Load</b>				
minimum 6d common, 2 in. long, ring shank nail, fastened 6 in. on center perimeter, 12 in. on center field	ASTM E661	Dry, in.	≤ 0.108 in. @ 200lb load	Pass
	ASTM E661	Dry, lbs	≥ 550 lbs minimum peak load	Pass
	ASTM E661	Wet/redry, in.	≤ 0.108 in. @ 200lb load	Pass
	ASTM E661	Wet/redry, lbs	≥ 550 lbs minimum peak load	Pass
<b>Concentrated Impact Load</b>				
minimum 6d common, 2 in. long, ring shank nail, fastened 6 in. on center perimeter, 12 in. on center field	ASTM E661	Dry, in.	≤ 0.108 in. @ 200lb load	Pass
	ASTM E661	Dry, lbs	400 lbs proof load	Pass
	ASTM E661	Wet/redry, in.	≤ 0.108 in. @ 200lb load	Pass
	ASTM E661	Wet/redry, lbs	400 lbs proof load	Pass

Design Table 4, HardieFloor® Wet Area Solution DOC PS-2 Uniform Loads

Property	Test Method		Requirement	Pass/Fail
<b>Uniform Distributed Load</b>				
minimum 6d common, 2 in. long, ring shank nail, fastened 6 in. on center perimeter, 12 in. on center field	DOC PS 2	Dry, in.	≤ 0.067 in. @ 60psf	Pass
	DOC PS 2	Dry, lbs	≥ 200lbs minimum peak load	Pass
	DOC PS 2	Wet/redry, in.	≤ 0.067 in. @ 60psf	Pass
	DOC PS 2	Wet/redry, lbs	≥ 200lbs minimum peak load	Pass

Design Table 5, HardieFloor® Wet Area Solution Allowable Uniform Loads

Deflection Limit	Allowable Uniform Load (PSF) <sup>1</sup>		
	Maximum Joist Spacing		
	16" on center	19.2" on center	24" on center
L/360	100	100	100

<sup>1</sup> These loads represent the load-carrying capacity of the panels spanning between the floor joists. A minimum of two spans is required. This table does not consider the influence of joist deflection.