

# Technical Attributes

## HardiePlank™ Lap Siding

Effective 12/2007

James Hardie Building Products, Inc.

HardiePlank™ Lap Siding has been comprehensively tested and displays the following typical physical properties.

	General Property	Test Method	Unit or Characteristic	Requirement	Result
PHYSICAL ATTRIBUTES	Dimensional Tolerances	ASTM C1185	Length	± 0.5%	Pass
		ASTM C1185	Width	± 0.5%	Pass
		ASTM C1185	Thickness	± 0.04 in.	Pass
		ASTM C1185	Squareness	< 1/32 in./ft of length	Pass
		ASTM C1185	Edge Straightness	< 1/32 in./ft of length	Pass
	Density, lb/ft <sup>3</sup>	ASTM C1185		As reported	< 83
	Water Absorption, % by mass	ASTM C1185		As reported	< 36
	Water Tightness	ASTM C1185	Physical Observations	No drop formation	Pass
	Moisture Content, %	ASTM C1185		As reported	~ 5
	Moisture Movement, % Linear Change	ASTM C1185	30 – 90% Relative Humidity	As reported	≤ 0.05
	Flexural Strength	ASTM C1185	Wet conditioned, psi	> 1015 psi	Pass
ASTM C1185		Equilibrium conditioned, psi	> 1450 psi	Pass	

	General Property	Test Method	Unit or Characteristic	Requirement	Result
THERMAL	Thermal Conductivity	ASTM C177	$K_{eff} = \text{BTU/hr-ft}^2\text{-}^\circ\text{F}$	As reported	2.07
	Actual Thermal Conductivity	ASTM C177	( $K_{eff}$ )	As reported	6.62
	Thermal Resistance	ASTM C177	$R=1/K_{eff}$	As reported	0.48
	Actual Thermal Resistance	ASTM C177	( R )	As reported	0.15

	General Property	Test Method	Unit or Characteristic	Requirement	Result
DURABILITY	Warm Water Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
		ASTM C1185	Warm Water, % wet retention	≥ 85%	Pass
	Heat/Rain Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
		ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
	Freeze/Thaw Resistance	ASTM C1185	Mass Loss, %	≤ 3.0	Pass
		ASTM C1185	Freeze/Thaw, % wet retention	≥ 80%	Pass
		ASTM G23	Physical Observations	No cracking, checking, or crazing	Pass

	General Property	Test Method	Unit or Characteristic	Requirement	Result
FIRE CHARACTERISTICS	Surface Burning Characteristics	ASTM E84	Flames Spread Index (FSI)	0	Pass
		ASTM E84	Smoke Developed Index (SDI)	≤ 5	Pass
		ASTM E84	Fuel Contributed	0	Pass
			NFPA Class	As reported	A
			Uniform Building Code™ Class	As reported	1
			International Building Code® Class	As reported	A
	Noncombustibility	ASTM E136	Noncombustible	Pass/fail	Pass
	Fire Resistance Rated Construction	ASTM E119	Fire Resistance Rating	1-hour	Note 1

Note 1: Listed on Warnock Hersey and ICC-ES NER-405

NOTE: In addition to the above product properties, building assemblies incorporating this product have been tested for fire, acoustic and impact performance.

© 2007 James Hardie International Finance B.V. All rights reserved TM, SM, and ® denote trademarks or registered trademarks of James Hardie International Finance B.V.

Additional installation information, warranties, and warnings are available at [www.jameshardie.com](http://www.jameshardie.com)



THIS TECHNICAL SUPPLEMENT MUST BE READ IN CONJUNCTION WITH THE CURRENT TECHNICAL PRODUCT LITERATURE. JAMES HARDIE BUILDING PRODUCTS MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE TECHNICAL PRODUCT LITERATURE. ALL COMPONENTS AND ACCESSORIES MUST BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S SPECIFICATIONS. FOR THE PRODUCT WARRANTY, TERMS AND CONDITIONS REFER TO THE APPLICABLE JAMES HARDIE TECHNICAL PRODUCT LITERATURE