

Wood HP4 4-In-1 Hybrid Polymer Adhesive

1 Product Name

Wood HP4 4-In-1 Hybrid Polymer Adhesive

2 Manufacturer

Custom Building Products
7711 Center Avenue
Suite 500
Huntington Beach, CA 92647
Customer Support: 800-272-8786
Technical Services: 800-282-8786
Fax: 800- 200-7765
Email: contactus@cbpmail.net
custombuildingproducts.com

3 Product Description

Wood HP4 is a hybrid polymer wood-plank adhesive that does the job of four products without the use of isocyanates. Perfect for critical applications, this 4-in-1 product works as an adhesive, concrete moisture barrier, sound reducer and crack suppressant all in one. Wood HP4 delivers excellent ridge retention and superior green grab, all while being easy to trowel.

Suitable as an adhesive

- Engineered Wood Plank & Parquet
- Engineered Bamboo
- Solid Wood Plank

Key Features

Features/Benefits of Product in the Installation

- 4-in-1 technology reduces install time and eliminates need for multiple products
- No Moisture Testing needed – Moisture Vapor Barrier
- Bridges non-structural cracks up to 1/8"
- Excellent Sound reduction properties
- Superior Early Grab and bond-strength
- Keeps projects moving fast and without worry
- Environmentally responsible – solvent-free and LEED® compliant
- Low odor, great for occupied environments

Suitable Substrates

- Cement-based self-leveling underlayment and patching compounds
- Cement/epoxy terrazzo
- Concrete (industry approved) – at least 14 days old with an appropriate moisture vapor barrier properly installed
- Epoxy Coatings
- Existing well bonded floor coverings
- Plywood and other approved wood substrates
- Properly prepared primed/sealed gypsum underlayment per ASTM F2419
- Radiant heated floors (temperature should not exceed 85° F)

* All surfaces / substrates above require proper surface preparation

Acceptable Substrate Conditions



- RH – 100 % / ASTM F2170 Relative Humidity in Concrete Floor Slabs – See wood flooring manufacture for product limitations and requirements
- pH [Substrate] – up to 12

Limitations to the Product

IMPORTANT NOTE: Finished Flooring limitations and requirements will supersede recommendations of Wood HP4 adhesive. Consult flooring manufacturer for performance data and recommendations.

- For interior use only
- Do not use when ambient and/or substrate temperature is below 50° F (10° C) or above 95° F (35 C) or when condensation exists
- Do Not install into/over standing water
- Not for use with solid vinyl, vinyl backed carpet flooring
- Existing adhesive must be removed to an embedded residue with no surface trowel ridges
- Do not install over treated plywood
- Not for use in areas subject to hydrostatic moisture conditions
- Concrete substrate temperatures must be above dew point/condensation
- Not for use as a moisture mitigation system under any other flooring types [see CustomTECH™ MVC]



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4 Technical Data

Applicable Standards

- ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
- ASTM E492-16 Standard Test Method for Laboratory Measurement of Impact Sound Transmission
- ASTM E989-18 Standard Classification for Determination of Single-Number Metrics for Impact Noise
- ASTM E90-16 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- ASTM E413-16 Classification for Rating Sound Insulation
- ASTM E2179-16 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
- NWFA / National Wood Flooring Association –Wood Flooring Installation Guidelines
- ICRI / International Concrete Institute

Technical Chart

Product Data	Composition	Advanced proprietary multi-polymer blend
	Appearance	Thick Creamy Paste
	Base color	Off-white
Product Timing	Open/working time – wet set	60 minutes
Service Timing	Installation - Light Traffic	60 minutes
	Installation - Moderate/Heavy	24 hours
	Installation - Full Service/Heavy Rolling	48 hours
Moisture Data	RH / Relative Humidity	up to 100%

Storage	Shelf life	1 year – stored in original unopened packaging at 73° F (23° C)
	Jobsite storage conditions required	50° F to 100° F (10° C to 38° C)

Environmental and Sustainability	Solvents	None
	Isocyanates	None
	VOCs (Rule #1168 of California's SCAQMD) - Super Compliant Products table https://www.aqmd.gov/home/rules-compliance/compliance/vocs/adhesive-and-sealants	<5 g/L
	*LEED Credits / MR5 and IEQ 4.1	Regional and low emitting materials
	Red List Free: https://living-future.org/declare/declare-about/red-list/	LBC / Living Building Challenge: This product has been verified to be free of any chemicals listed per the most current Red List on the LBC's website.

Sound Reduction Ratings - 3/8" Thick Engineered Wood Flooring Over 6" concrete slab		
Specification	No Suspended Ceiling	Suspended Gypsum Ceiling
ASTM E 492-09 (2016) e1/ E989-18	46 (NGC 7020171)	68 (NGC 7020170_R1)
ASTM E 2179-03 (2016)	17.8 (NGC 7020172)	N/A

Environmental Consideration

Custom® Building Products is committed to environmental responsibility in both products produced and in manufacturing practices. Use of this product may contribute to LEED® certification.



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5 Instructions

Installation

Concrete must be free of efflorescence and not subject to moisture beyond the floor covering manufacturers' limits or hydrostatic pressure. Lightweight concrete surfaces must have a tensile strength in excess of 200 psi (1.4 n/mm²). HVAC must be operational between 60-95°F/30-65% relative humidity for ambient conditions a minimum of 72 hours prior to installation enabling the substrate and adhesive to be properly climatized. Consult the flooring manufacture for site conditioning requirements and climatization requirements of their materials. Large temperature and relative humidity discrepancy will affect the working time of the adhesive. Disable radiant system 24 hours prior, during and after installation – Follow radiant system manufacture's instruction for start-up procedures.

1. Use proper Personal Protective Equipment (PPE) when handling product.
2. Remove all surface water before installation.
3. Install per wood flooring manufactures instructions. Do not go beyond the working time of the product to prevent bond failure.
4. Spread the adhesive on the substrate using the recommended trowel. See Trowel table below and always follow floor covering manufactures trowel recommendations.
5. Install wood flooring according to the wood-flooring manufacturer's written instructions. 6. Using the appropriate trowel to apply adhesive that can be covered within 60 minutes. Do not allow adhesive to dry or "skin-over" before installation of wood or floor covering. Install / Coverage
7. For moisture barrier performance use the required trowel attachment (Clip) included in the bucket. HP4 Shark Tooth trowel clip is a single use only – one clip for one bucket of adhesive. To maintain the product warranty only use one trowel clip/attachment per one bucket of adhesive.
8. Press firmly into the wet adhesive bed to compress all ridges and maintain a continuous film defined by HP4 Shark Tooth trowel clip.
9. Occasionally lift up a board and check the subfloor for 100% coverage which is critical for moisture control. If proper transfer is not achieved, reapply using the recommended trowel.
10. Working and drying time of the adhesive is influenced by temperature, humidity of the room, air-flow and substrate temperatures/porosity.
11. Roll flooring's width and length with manufacture's recommended weight roller.
12. Allow for normal wood expansion at wall perimeter and all restraining abutments.
13. PROTECTION – General Contractor, Flooring Contractor and Building owner must provide proper climate controls per flooring manufacturers requirements before, during and after flooring installation.

General Surface Prep

All surfaces must be structurally sound, without excessive deflection, clean, dry, and free from contaminants that would prevent or inhibit adhesion bonding. Concrete and cement-based underlayment/patching compounds must be fully cured and not exhibit signs of moisture or hydrostatic conditions/issues. Any existing adhesive must be removed to an embedded residue.

Concrete substrates must have porosity/absorption and be free of curing compounds that prohibit proper bonding. When using as a moisture barrier under flooring, mechanical methods of preparing/profiling the surface are required. Use the ICRI/International Concrete Repair Institute's Guideline No. 03732 to achieve a #2 to #3 CSP/Concrete Surface Profile by using shotblasting and/or diamond grinding methods when and where necessary. Refer to ASTM F3191 for Field Determination of Substrate Water Absorption.

All surfaces must be flat, sound and stable. Floor Flatness requirements apply per wood manufacture and NWFA Installation Guidelines.

Do not install adhesive over substrates exhibiting hydrostatic conditions.

CUSTOM® products may be used in assemblies over concrete with high moisture vapor emission levels provided that other materials such as finish flooring, adhesives or membranes are approved in these conditions. Consult the manufacturers for their limitations and requirements. Additionally, any sources of moisture are to be limited to initial concrete placement and not from sources such as water intrusion or from a lack of an effective vapor retarder/barrier. Substrate must be prepared per ASTM F710 standards.

It is the responsibility of the installer to determine the suitability of the substrate and any required preparation work necessary to ensure a successful installation.

Assembly mockups will determine suitability for these conditions on specific projects. Contact CUSTOM Technical Services for product information (800) 282-8786.

Fill all surface cracks, grooves, depressions, control joints and non-moving joints According to ASTM F710. Contaminants or curing compounds should be mechanically removed before installation.

Cleaning of equipment

Consult the wood manufacture for cleaning wood finish surface instructions. To remove cured adhesive from pre-finished flooring, use a citrus cleaner or mineral spirits. Apply the adhesive remover to the affected area with a non-abrasive towel and allow to sit for 5-10 minutes to soften the adhesive. Then buff the adhesive off with the non-abrasive towel. Use personal protective equipment (chemical resistant gloves/goggles/clothing). Without direct contact, remove spilled or excess product and placed in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

Conformance to Building Codes

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.



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6 Availability & Cost

Contact the manufacturer or visit custombuildingproducts.com for information about product cost and availability.

ITEM CODE	SIZE	PACKAGE
PHAAT4	4 gal (15.1 L)	Pail

7 Product Warranty

- 2 Years – Product only, unopened and properly stored.
- 15 Year System – CUSTOM Adhesive and CustomTECH Floor Preparation Systems.
- FLOOR-MATCH Warranty – CUSTOM Adhesives & CustomTECH Floor Preparation Products/Systems are warranted equal to the Flooring manufacturer's warranty term up to LIFETIME. *See CUSTOM FLOOR-MATCH Warranty, separate document.

8 Product Maintenance

Follow wood flooring manufacturers written instructions for proper maintenance schedules, chemicals and techniques.

Properly installed product requires no special maintenance, see flooring manufacture for service and maintenance requirements.

9 Technical Services Information





For technical assistance, contact Custom Technical Services at (800) 282-8786 or contact us online at custombuildingproducts.com.

10 Filing System

Additional product information is available from the manufacturer upon request.

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Coverage

SQUARE FOOT COVERAGE PER GALLON (SQUARE METER PER 3.8 L)		
For moisture control, crack bridging and sound reduction	30 - 35 sq. ft. (2.79 - 3.25 M ²)	Shark Tooth Trowel Clip 
Wood Parquet	60 - 80 sq. ft. (5.57 - 7.43 M ²)	1/8" x 1/8" x 1/8" (3.2 x 3.2 x 3.2 mm) SQ 
Solid or Engineered Wood plank (pre-finished or unfinished) < 1/2" (12.7 mm) thick	45 - 55 sq. ft. (4.18 - 5.11 M ²)	3/16" x 5/32" (4.8 x 4.0 mm) V 
Engineered Wood plank 1/2" - 5/8" (12.7 - 16 mm) thick	40 - 50 sq. ft. (3.75 - 4.65 M ²)	1/4" x 1/8" x 1/4" (6.4 x 3.2 x 6.4 mm) SQ 

*No more than 140 square feet of adhesive should be spread using the HP4 Shark Tooth trowel attachment / one per bucket.

Chart for estimating purposes. Coverage may vary based on installation practices and jobsite conditions. For more sizes, use the material calculator at CustomBuildingProducts.com or contact CUSTOM Technical Services at 800-282-8786.



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