



P R O D U C T I N F O R M A T I O N

## BOSTIK'S BEST Wood Flooring Urethane Adhesive

Does Not Contain Water or Chlorinated Solvents • V.O.C. Compliant • Ozone Friendly

### PRODUCT DESCRIPTION

Bostik's Best is a one-part, trowel-applied, moisture-cure, waterproof adhesive. Once cured, its superior elastomeric properties provide a tough, flexible, tenacious bond to a variety of surfaces. Bostik's Best elastomeric characteristics allow the adhesive to move with wood as it expands and contracts. This scientifically formulated adhesive is not affected by exposure to moisture or water. **Bostik's Best contains no chlorinated solvents or ozone depleting chemicals, and complies with all current state and federal regulations for Volatile Organic Compounds (V.O.C. Compliant).**

### FEATURES & BENEFITS

- contains no water
- high solids content results in greater adhesive coverage
- set with *Wet-Lay* or *Walk-On-Work* method of installation
- V.O.C. Compliant
- nonflammable
- Flame Spread Index of 25 when tested in accordance with ASTM E-84
- contains no Chlorinated Solvents
- tacky consistency holds down laminates with normal bow, and bridges minor subfloor variations
- ozone friendly
- tenacious bond
- remains elastomeric; moves with expanding/contracting wood
- low odor
- waterproof adhesive
- for use in *above, on,* and *below* grade installations
- freeze/thaw stable
- may be shipped by air freight
- offers vapor-retarding characteristics to wood flooring installations (see *Chemical & Physical Properties* section)

### PRODUCT USES

Bostik's Best adheres to 3-ply or 5-ply engineered plank, acrylic impregnated, solid plank-flat milled, shorts, plywood and parquet wood flooring. This adhesive can also be used to install ceramic tile, marble and stone inlays for light commercial and residential applications.

Because Bostik's Best is a waterproof adhesive, it offers some vapor-retarding characteristics to wood flooring installations. Use Bostik's Best over all substrates common to hardwood flooring installations including: concrete, plywood, particle or chip board (underlayment grade), well bonded vinyl, ceramic tile, cement backer board, gypsum patch/underlayments (dry, above grade), cement patch/underlayments, radiant heat flooring, cutback residue (refer to *Limitations*), and terrazzo.

### CHEMICAL & PHYSICAL PROPERTIES

V.O.C. Compliant	102 grams/liter.
ASTM-E96 Value	.6 grams perm-24 hr-mm Hg.
Initial Tack Time*	Begins about 1 hour and will remain tacky for an additional 2 hours at 70°F and 40% relative humidity.
Open Time*	About 3 hours at 70°F and 40% relative humidity.
Application Temperature	50°F to 100°F.
Service Temperature	Range is -40°F to 150°F.
Cure Time	Higher humidity and temperature will accelerate cure. Under normal conditions, light-foot traffic is acceptable after 8 to 10 hours, normal traffic after 24 hours.
Flammability	Based on ASTM E-84 tests: Flame Spread Index is 25.
Flash Point	142°F, closed cup.
Viscosity	220,000 cps.
Odor	Mild/not easily detectable.
Color	Amber.
Weight	12.66 lbs. per gallon.
Peel Adhesion (dry)	
(a) to plywood	20 plw
(b) to concrete	25 plw
Peel Adhesion (wet)	
(a) to plywood	18 plw
(b) to concrete	22 plw
Tensile & Elongation	
(a) Modulus at 25%	> 150 psi
(b) Elongation at break	125%
Shear Strength to Concrete	
(a) 3/4" plywood	> 250 psi
(b) 5/16" oak parquet	> 250 psi
(c) 3/4" oak shorts	> 250 psi

\*Refer to Temperature/Humidity Chart on back.

Bostik®

09300

9 Wood Flooring Urethane Adhesive

January 1998. Supersedes all previously published literature.

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## LIMITATIONS

- This adhesive will not prevent moisture-related damage to wood flooring installations.
- Humidity affects characteristics of adhesive to a greater degree than temperature. The higher the humidity, the faster the cure.
- Slab temperature should be between 50°F and 100°F during installation.
- Do not use on wet, contaminated, or friable substrates.
- Below-grade installations are limited to engineered plank and foam divided parquet (this is due to limitations in solid wood flooring i.e. lack of dimensional stability).
- Do not use in areas subject to hydrostatic head.
- Do not use over concrete treated with sealers or curing compounds.
- Do not allow light-foot traffic until fully cured; usually 8 to 12 hours.
- Do not use as a leveling material.
- Use as an adhesive for ceramic tile, marble or granite inlays is limited to light commercial or residential applications.
- Do not install solid wood over cutback residue.
- If there are any moisture-related concerns, completely remove cutback adhesive residue by sandblasting, shotblasting or scarifying.

## INSTALLATION

Read and understand data sheet completely before beginning installation. **Follow industry standards and wood floor manufacturer's recommendations for subfloor moisture content, design, layout and application of wood flooring materials.**

**SURFACE PREPARATION:** Surfaces must be clean, dry and smooth; free of voids, projections, loose materials, oil, grease, sealers and all other surface contaminants. If there are any moisture-related concerns, or if solid wood is being installed, completely remove cutback adhesive residue by sandblasting, shotblasting or scarifying. When sandblasting, shotblasting or scarifying, surface texture must be similar to light broom finished concrete. The Blastrac shotblasting method of surface preparation utilizing BT#1, BT#2 or BT #3 (.017" to .028" diameter) shot is recommended. Maximum acceptable floor variation is 1/8" in 10 feet. Surface areas requiring patching or leveling should be done using a portland cement based material (contact Bostik's Technical Service Department for recommendations).

As you work, immediately clean any adhesive on pre-finished flooring with a soft cloth and mineral spirits. (Be careful not to harm finish).

If adhesive is cold, place pail in either a warm area or bucket of warm water to improve workability.

## APPLICATION

Ensure starter rows are firmly in place by wedging or face nailing. Once initial rows are secure, use adhesive in a *Wet-Lay* or *Walk-On-Work* method of installation.

**WET-LAY METHOD:** Apply adhesive to substrate with suitable trowel. Immediately place flooring onto "wet" adhesive.

**WALK-ON-WORK METHOD:** Apply adhesive to substrate with suitable trowel and allow it to develop tack (refer to Temperature/Humidity Chart). Install flooring onto "tacky" adhesive.

**As you work, immediately clean any adhesive from prefinished flooring with a soft cloth and mineral spirits. (Be careful not to harm finish.)**

**Rolling is recommended for all installations. Flooring that is not flat should be tacked, weighted, or rolled to ensure proper contact between the flooring and the substrate.**

**Where Plywood Substrate Over Concrete is Required:** Using a 1/4" x 1/4" square-notched trowel to apply adhesive, set 4' x 4' sheets of 3/4" exterior grade plywood into wet adhesive. Score plywood sheets on the backside every 8" to 10" by using a circular saw and cutting one half the thickness of the sheets. Scoring or "kerfing" takes the tension out of plywood and helps prevent possible warping or curling. Allow to fully cure before nailing strip or using Bostik's Best in a Wet-Lay or Work-On-Work method of installation.

## CLEAN UP

Once cured this is the most tenacious adhesive known to the hardwood industry. Immediately clean any adhesive on pre-finished flooring with a soft cloth and mineral spirits. (Be careful not to harm finish.) Do not allow mineral spirits to sit on hardwood surface. Clean tools and equipment with mineral spirits before adhesive cures. Wear rubber gloves when using adhesive. Removal of cured adhesive from pre-finished flooring, skin, tools and equipment is extremely difficult. Use Bostik #94 Hand Cleaner for removal of uncured adhesive on skin.

**TROWEL CLEAN-UP TIP:** Before use, cover areas of trowel that are not used to spread adhesive with clear packaging or gray duct tape. After use, simply tear off tape before material cures. Clean remainder of trowel with a dry cloth or mineral spirits.

**CURING**

Keep from light-foot traffic until adhesive is fully cured; usually 8 to 12 hours.

**STORAGE/SHELF LIFE**

Store in a clean, dry, warm area to ensure ease of application. Shelf life is one year from the date of manufacturing.

**TO RE-SEAL PARTIALLY USED CONTAINERS**

**Close Container:**

- Cover opened pail with 2 pieces of plastic.
- Secure lid tightly to pail.
- Carefully turn pail upside down (the 2 pieces of plastic act as "bond breakers" preventing the adhesive from bonding the lid shut).

**Re-Open Container:**

- Carefully turn pail right-side-up.
- Remove lid.
- Carefully cut and discard cured adhesive and plastic from top of pail.
- Any uncured material may be used.

**PACKAGING**

Bostik's Best is available in three sizes:

Size	Qty/Pallet	Wt/Pallet
1 gallon (3.8 liters)—4/case	45 cases/pallet	2,350 lbs.
2.08 gallon (7.8 liters)	64/pallet	1,700 lbs.
5.15 gallon (19.5 liters)	27/pallet	1,790 lbs.

For the name of a distributor nearest you, contact a Bostik Customer Service Representative at 1-800-726-7845.

**TECHNICAL SERVICE**

For additional technical information, contact Bostik's Technical Service Department at 1-978-750-7356 or 1-800-523-6530.

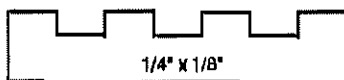
**SUGGESTED NOTCHED TROWEL FOR MAXIMUM PERFORMANCE**



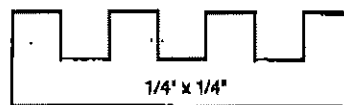
1/8" x 1/8" Square Notch  
Finger Block Parquet  
Coverage: 80 sq. ft. per Gallon



3/16" x 5/32" V Notch  
3 ply and 5 ply Engineered Plank  
Coverage: 50 sq. ft. per Gallon



1/4" x 1/8" Square Notch  
>1/2" Engineered Plank & 3/4" Parquet  
Coverage: 40 sq. ft. per Gallon



1/4" x 1/4" Square Notch  
Flat Milled Solid & Shorts or Plywood  
Coverage: 35 sq. ft. per Gallon

**Trowel size is suggested to maximize coverage of adhesive. 80% coverage is required for engineered plank—95% coverage is required for solid woods. Periodically check coverage during installation. Uneven subflooring may require the use of either a leveling/patching material, or a larger notched trowel for proper coverage of adhesive.**

## TEMPERATURE/RELATIVE HUMIDITY CHART

TEMP.		HUMIDITY				
		40%	50%	60%	70%	80%
60°F	Tack	120 Minutes	110 Minutes	100 Minutes	90 Minutes	80 Minutes
	Open	3.5 Hours	3.5 Hours	3.5 Hours	3 Hours	3 Hours
65°F	Tack	110 Minutes	100 Minutes	90 Minutes	80 Minutes	70 Minutes
	Open	3 Hours	3 Hours	3 Hours	3 Hours	2.5 Hours
70°F	Tack	100 Minutes	90 Minutes	80 Minutes	70 Minutes	60 Minutes
	Open	3 Hours	3 Hours	3 Hours	2.5 Hours	2.5 Hours
75°F	Tack	90 Minutes	80 Minutes	70 Minutes	60 Minutes	50 Minutes
	Open	3 Hours	2.5 Hours	2.5 Hours	2.5 Hours	2.5 Hours
80°F	Tack	80 Minutes	70 Minutes	60 Minutes	50 Minutes	40 Minutes
	Open	3 Hours	2.5 Hours	2.5 Hours	2.5 Hours	2 Hours

**NOTE:** This chart is for reference only. Actual times may vary dramatically based on job site conditions.

### WORLD HEADQUARTERS

**Bostik**  
Middleton, MA 01949  
800-7-BOSTIK or  
800-726-7845

### TECHNICAL SERVICES

800-523-6530  
978-750-7356

### MANUFACTURING LOCATIONS

Long Beach, CA 90813  
Conyers, GA 30207  
Twinsburg, OH 44087  
Huntingdon Valley, PA 19006

## LIMITED WARRANTY

All statements, technical information, and recommendations set forth herein, are based on tests which Bostik believes to be reliable. However, Bostik does not guarantee their accuracy or completeness. The buyer should conduct his/her own tests of this product before use to determine proper preparation technique and suitability for proposed application. Any sale of this product shall be on terms and conditions set forth on Bostik's order acknowledgement. Bostik warrants that the product conforms with Bostik's written specifications, and is free from defects. BOSTIK DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE BUYER'S SOLE REMEDY FOR NONCOMPLIANCE WITH THIS WARRANTY SHALL BE FOR THE REPLACEMENT OF THE PRODUCT OR REFUND OF THE BUYER'S PURCHASE PRICE. IN NO CASE WILL BOSTIK BE LIABLE FOR DIRECT, CONSEQUENTIAL, ECONOMIC OR OTHER DAMAGES.



**National Wood Flooring Association**



# MATERIAL SAFETY DATA SHEET

HAZARD RATINGS HMIS

**BOSTIK FINDLEY**Health 1  
Flammability 2  
Reactivity 0  
PPE X

## 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Product Name** A45200  
**MSDS Name** BST URETHANE L  
**CAS Number** Mixture  
**Generic Description** Polyurethane Wood Floor Adhesive  
**Manufacturer** BOSTIK FINDLEY, INC.  
211 Boston Street  
Middleton , MA 01949 USA

### 24 Hour Emergency Assistance

Phone: 1-800-227-0332

### General Assistance

Phone: 1-978-777-0100

### MSDS Assistance

Phone: 1-978-777-0100

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Percentage
Mineral Spirits	8052-41-3	1 - 5
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1
Non-hazardous and other ingredients below reportable levels	Proprietary	Balance

## 3 HAZARDS IDENTIFICATION

### Emergency Overview

This product contains materials that on exposure could cause irritation and minor residual injury even if no treatment is provided. This product is stable under normal conditions but will react slightly with water to release some heat and carbon dioxide. The reaction is not violent.

### POTENTIAL HEALTH EFFECTS

**Skin Contact:** Skin contact may cause irritation. A component of this product is a potential skin sensitizer. Repeated skin contact may cause a persistent irritation or dermatitis.

**Eye Contact:** May cause irritation with temporary redness with stinging and tearing.

**Inhalation:** Inhalation of hot mist may cause respiratory irritation. Prolonged or repeated exposure may cause asthmatic or other pulmonary responses.

**Ingestion:** Exposure is unlikely. This product can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

### Target Organs

Skin. Eyes. Lungs.

MSDS Number 15948 Product A45200  
Label Number 15948 NA = Not Available ND = Not Determined

## 4 FIRST AID MEASURES

### **Skin**

Remove contaminated clothing to prevent further skin exposure and dispose of properly. In situations involving considerable skin contact, place the contaminated person in a deluge shower for at least 15 minutes. For minor exposures, wash thoroughly with soap and clean water. Get medical attention if irritation persists.

### **Eye**

Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately. See Notes to Physician.

### **Inhalation**

Remove to fresh air. Give artificial respiration if not breathing. If symptoms persist, get medical attention.

### **Ingestion**

No harmful effect is anticipated. If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. If victim is conscious and not convulsing give 1 or 2 glasses of water to dilute the chemical. Never give anything by mouth to a victim who is unconscious or is having convulsions.

### **Notes To Physician**

Treat symptomatically and supportively. Contact Bostik Findley to determine whether any additional information is available.

## 5 FIRE FIGHTING MEASURES

### **Extinguishing Media**

Use dry chemical, carbon dioxide, or foam. Use water spray on large fires.

### **Dust Explosion Hazard**

None Known

### **Sensitivity To Mechanical Impact**

None Known

### **Sensitivity To Static Discharge**

None Known

### **Unusual Fire & Explosion Hazards**

This product is classified as a Combustible Liquid. Containers may explode in a fire. Product may burn and produce toxic gases in a fire.

### **Fire Fighting Equipment/Instructions**

Firefighters should wear full protective clothing including self contained breathing apparatus.

**Flash Point** 142 F (61 C)

## 6 ACCIDENTAL RELEASE MEASURES

### **Emergency Action**

Appropriate safety measures and protective equipment should be used. See Section 8.

**Containment**

Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Scrape up polyurethane and deposit into appropriate containers.

**7 HANDLING & STORAGE**

For Commercial Use Only - Not Packaged or Labeled for Home Use!

**Handling**

Avoid contact with skin and eyes. Wash thoroughly after handling. Use this product with adequate ventilation.

**Storage**

Store in a clean, dry area. Keep containers closed.

**Empty Container Precaution**

Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering Controls**

Use local exhaust ventilation when vapors, mists, or dusts can be released in concentrations above the TLV. Local exhaust is preferred, but general ventilation may be acceptable to meet exposure limits.

**Eye Protection**

Wear safety glasses with side shields.

**Skin And Body Protection**

Cover as much of exposed skin as possible. Wear protective clothing that provides protection against skin exposure. Wear chemical resistant gloves and clothing.

**Respiratory Protection**

Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.

**General**

Eyewash fountains and emergency showers should be readily available. Use good industrial hygiene practices in handling this material.

## Exposure Limits

### ACGIH - Occupational Exposure Limits - TWAs

4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4'-DI	101-68-8	0.005 ppm TWA
STODDARD SOLVENT - A COLORLESS, REFINED PETROLEUM DISTILLATE	8052-41-3	100 ppm TWA

### OSHA - Vacated PELs - Ceilings

4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4'-DI	101-68-8	0.02 ppm Ceiling; 0.2 mg/m3 Ceiling
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### OSHA - Vacated PELs - TWAs

STODDARD SOLVENT - A COLORLESS, REFINED PETROLEUM DISTILLATE	8052-41-3	100 ppm TWA; 525 mg/m3 TWA
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## 9 PHYSICAL & CHEMICAL PROPERTIES

Boiling Point	310 - 405 F (154 - 207 C)
Vapor Pressure	2 mm HG
Vapor Density	5
Solubility In Water	0 %
Target Solids	93 %
pH	N/A
Density	1.508 g/cc
Odor	Solvent
Color	Amber
Physical State	Paste
Freeze Protect	No

## 10 STABILITY & REACTIVITY

### Stability/Incompatibility

Stable under normal conditions.

### Hazardous Reactions/Decomposition Products

If product is burned carbon monoxide, carbon dioxide, oxides of nitrogen, amines, isocyanate-containing compounds and other unknown products may be produced.

### Hazardous Polymerization

Not likely to occur. However, curing of product releases carbon dioxide. If curing occurs inside a closed container, pressure buildup may result.

### Conditions To Avoid

Avoid contact with Strong Oxidizers, Strong Alkalis, Strong Acids, Alcohols, and Water.

## 11 TOXICOLOGICAL INFORMATION

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MSDS Number	15948	Product	A45200
Label Number	15948	NA = Not Available	ND = Not Determined

**Ld50****NIOSH - Selected LD50s and LC50s**

4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4'-DI	101-68-8	Inhalation LC50 Rat: 178 mg/m3; Oral LD50 Rat: 9200 mg/kg; Oral LD50 Mouse: 2200 mg/kg
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**Carcinogenicity**

This product contains Methylene Diphenyl Isocyanate (MDI). MDI is not listed by the NTP, IARC or regulated by OSHA as a carcinogen. However, it has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity.

**12 ECOLOGICAL INFORMATION**

**VOC (Volatile Organic Compounds)** 86 g/l

**Ecotoxicological Information**

Organic solvents produce slight to moderate toxicity to aquatic life. Insufficient data exists to evaluate the effect on plants, birds or land animals.

**13 DISPOSAL CONSIDERATIONS**

We make no guarantee or warranty of any kind that the use or disposal of this product complies with all local, state, or federal laws. It is also the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable statutes.

**Waste Disposal**

This product is not known to be regulated under RCRA regulations but contains SARA regulated substances. Disposal of unused portions of this product and process waste containing this product should be done only after a careful evaluation and in compliance with all federal, local and state laws.

**14 TRANSPORT INFORMATION**

Proper Shipping Name	Not Regulated
Hazard Class	Not Applicable
DOT Restrictions	Not Applicable

**15 REGULATORY INFORMATION**

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

**Federal Regulations**

All components are on the U.S. EPA TSCA Inventory List.

**CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4'-DI	101-68-8	5000 lb final RQ; 2270 kg final RQ
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Based on an evaluation of the components used, this product does contain hazardous ingredients identified as per 29 CFR 1910.1200.

**State Regulations**

If this product contains any ingredients listed under California Proposition 65, they will be noted below:

**International Regulations**

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).  
Class D Division 2 Sub-division B. and Class B Division 3

**SARA 302 EXTREMELY HAZARDOUS SUBSTANCES**

Not Regulated

**SARA 311/312 HAZARD CATEGORIES**

Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

**SARA 313 TOXIC CHEMICALS**

Component	CAS Number	Percentage
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1

**WHMIS RATINGS**

Compressed Gas	No	Flammable/Combustible	No	Oxidizer	No	Acutely Toxic	No
Other Toxic Effects	Yes	Bio Hazardous	No	Corrosive	No	Dangerously Reactive	No

**16 OTHER INFORMATION**

**Disclaimer**

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik Findley, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

**Issue Date** 17-Nov-2003      **Supersedes** 16-Jan-2002  
**Prepared By** Michael Simon

**MSDS Sections Reviewed and/or Updated**

Composition / Information on Ingredients  
Physical & Chemical Properties