

ULTRA  
LOW  
VOC!

# BILDER'S ULTIMATE

ALL-IN-ONE

## URETHANE FLOORING ADHESIVE

WITH MOISTURE & SOUND BARRIER

### PRODUCT DATA SHEET



#### FEATURES

- Low perm poly BD chemistry
- Retards Moisture Vapor Transmission From Concrete Slabs
- Reduces Sound Transmission
- Crack Bridging
- Low Odor
- Excellent Green Grab
- Does Not Contain Water
- Suitable for Installation of Solid Plank, Bamboo and Engineered Flooring
- Elastic, allows wood to expand and contract without stressing adhesive

#### TECHNICAL DATA

- WPG 12.8 lb/gal
- Color: Beige
- Sound Reduction: STC = 66; IIC = 70;  $\Delta$ IIC = 20
- Flash Point >200°F
- Tensile > 210 psi
- Elongation > 300%
- VOC Content: Negligible (<5g/L)
- Upper Moisture Limit 20 lbs and/or 90% RH

**Ultimate** is a single component, water free, polyurethane adhesive formulated to bond engineered, solid and bamboo flooring to concrete, plywood and other approved substrates.

**Ultimate** is also designed to have a low permeability to reduce moisture vapor transmission between concrete sub-floors and hardwood or Bamboo flooring.

**Ultimate** develops a permanent bond and remains flexible to withstand expansion and contraction of the flooring.

**Ultimate** is designed to flow slightly so that gaps between trowel ridges will close and create a continuous polyurethane membrane. When applied as directed for subfloor moisture protection, **Ultimate** will prevent damages caused to flooring from moisture in the substrate. **Ultimate** is flexible and will bridge in-plane cracks up to 1/8" wide in concrete.

Do not use **Ultimate** on subfloors with historical or obvious severe moisture problems; or those with a moisture vapor emission rate >20lbs per 1000 square feet using the calcium chloride test (ASTM F-1869) or with a relative humidity >90% when tested using in-situ RH probes (ASTM F-2170).

**Ultimate** is also ideal for permanent glue-down installations of plywood subfloors over concrete and for ceramic or stone tile inlays.

**Ultimate** may be used over cement patches, cement self-leveling underlayments or screeds; properly prepared existing ceramic tile, well bonded sheet vinyl or VCT tiles existing cement terrazzo, underlayment grade chip board and gypsum concrete that has a minimum 2000 psi mix design for engineered flooring and 2500 psi mix design for solid and bamboo flooring. **Ultimate** is suitable for the installation of flooring over electrical warming and radiant heat systems.

**Ultimate** exceeds the VOC requirements for Southern Coast Air Quality Management District (SCAQMD) for wood flooring adhesives and therefore may contribute to the qualification of a project for LEED NC V3 certification for "Indoor Environmental Air Quality" credits for low emitting materials ED 4.1 Adhesives and Sealants.

## DIRECTIONS FOR USE

Review the technical data sheet prior to starting the installation. Follow applicable industry guidelines and manufacturer's instructions for design, layout, acclimation and expansion space around the perimeter and within the field of flooring.

## SURFACE PREPARATION

Improper surface preparation is the most common reason for failure of glue down wood flooring. Surface preparation is especially critical when installing less stable products such as solid hardwood or bamboo flooring.

Surfaces must be clean, dry and flat to within 3/16" in 10'; free of voids, loose materials, paint, varnish, adhesive residues, sealers, oil, grease, plaster and gypsum finishing compounds. Asphaltic "cut-back" adhesive residues should be completely removed prior to the installation of solid or bamboo flooring

or if there is concern/history with elevated moisture content in concrete.

**CAUTION:** Black mastic or cut-back adhesive residues may contain asbestos. Follow applicable state and federal regulations for handling asbestos containing materials.

Dimensionally stable, engineered flooring may be installed over on and above grade concrete that has an asphaltic or "cut-back" adhesive residue after preparation. Such a residue must be completely removed from the surface and only exist as a black stain on the concrete. Do not install solid or bamboo flooring over cut-back adhesive residue; and do not install over cut-back adhesive residue below grade or if there is or ever has been a moisture concern with the slab.

Concrete substrates should not be smooth or reflective. Suitable concrete will have a minimum CSP 3 surface profile, which is similar in roughness to a light broom finish.

Remove contamination and create a surface profile by diamond grinding, shot blasting or scarifying. The use of floor sanding equipment may polish contaminants into the concrete. Be sure the resulting concrete is porous and clean.

Areas that require patching or leveling should be treated with Portland cement based materials. Do not use gypsum patching or leveling products for substrate preparation.

If installing over existing sheet vinyl or VCT, all waxes and sealers must be completely removed and the existing flooring must be well bonded. Installations over existing sheet vinyl or VCT are limited to dimensionally stable engineered wood flooring only.

If installing over existing ceramic tile, natural stone or terrazzo, all waxes and sealers must be completely removed. Highly reflective tile, stone or terrazzo should be lightly abraded with a sanding disk to improve adhesion.

## INSTALLATION

Job-site conditions effect the handling and curing of this adhesive. Cold conditions make adhesives more difficult to spread. High relative humidity accelerates cure/hardening. Dry conditions slow cure/hardening.

Installation begins with a starter row secured to the subfloor. The starter row provides a stationary point to push against so the flooring doesn't move during the installation process. Once the starter row is complete, apply the adhesive to the substrate using

the appropriate notched trowel. Refer to the trowel coverage chart on the back page.

Install the flooring immediately into the adhesive. Avoid getting adhesive on pre-finished wood flooring. Immediately remove any adhesive from the surface of the flooring using a towel or rag dampened with mineral spirits paint thinner. Take care to remove all adhesive from the surface prior to curing/hardening. Cured adhesive is difficult to remove from pre-finished flooring.

After a few rows have been installed, tape the boards together using 3M #2080 Blue tape. The tape will prevent the flooring from and sliding. Flooring that is not flat should be weighted to ensure proper adhesive transfer between the flooring and the sub-floor.

To remove cured adhesive from prefinished flooring, use Sentinel 747 adhesive remover. 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. Be sure to clean any remaining adhesive remover from the floor.

## GLUE-DOWN INSTALLATION OF PLYWOOD SUBFLOOR

Use 19/32" (5/8") or better plywood subfloor panels cut into 2' X 8' or 4'X4' sections. Score the backside of the panels every 12" in both directions. Apply **Ultimate** to the subfloor using a 1/4" X 1/4" square or V notch trowel and lay the sections of subfloor into the adhesive in a staggered joint pattern with 1/8" space between the panels and 3/4" space around the perimeter and vertical obstructions.

## LIMITATIONS

- Periodically check coverage of the adhesive during the installation. 100% coverage of the substrate is required for protection from subfloor moisture. Solid and bamboo wood flooring require a 95-100% adhesive transfer between the substrate and flooring. Engineered flooring requires a minimum 80% adhesive transfer between the substrate and the flooring.
- Installation of unstable flooring such as bamboo or solid flooring is not recommended for below grade applications.
- On or below grade construction must have a functioning vapor barrier (6mil poly or better) beneath the slab.
- Do not install dimensionally unstable wood such as solid or bamboo over existing sheet vinyl or VCT.

- Do not install flooring over perimeter bonded sheet vinyl.
- Slab temperature should be between 50°F-95°F during installation.
- Turn radiant heating or floor warming off during and for 72 hours after installation.
- Do not use on wet, dusty, contaminated, reflective or friable substrates. Do not use on sub-floors treated with sealers or curing compounds. Do not use on concrete slabs subject to hydrostatic pressure.
- Completely remove adhesive residue, sealers and contaminants by diamond grinding, shot blasting or scarifying.
- Use over gypsum concrete should be limited to substrates in that are in solid condition. Do not glue down flooring over gypsum concrete that is powdery and cracked.
- Gypsum concrete should have a minimum mix design of 2000 psi for engineered flooring and 2500 psi for solid or bamboo wood flooring.
- Do not use to install foam backed parquet.
- Refer to the flooring manufacturers recommendations and NWFA guidelines for acclimation and required expansion space as these requirements vary substantially.

**IMPORTANT:** **Ultimate** is designed and intended to reduce moisture vapor emissions that originate from concrete subfloors. There are numerous potential sources of moisture that may damage wood flooring. **Ultimate** does not affect moisture from sides, ends or top of the flooring or humid conditions within a structure. Manufacturer recommends allowing the adhesive to cure for 12-15 hours before walking on it, and 24 hours before moving heavy furniture back into place.

## STORAGE AND SHELF LIFE

Pails of **Ultimate** are purged at the factory to remove moisture and minimize skinning or curing in the container. If there is a layer of cured adhesive simply remove it with a utility knife and discard. Shelf life of unopened containers is 1 year from the date of manufacture. **Ultimate** is available in 4 gallon and 2 gallon pails.

## SUGGESTED NOTCHED TROWELS

Larger notched trowels are used for thicker flooring products. Additional adhesive will fill voids and minimize hollow spots. For adhesive & moisture protection, trowels with a saw tooth configuration are required to ensure 100% slab coverage.

## FOR INSTALLATIONS THAT REQUIRE SUBFLOOR MOISTURE PROTECTION



Flooring Up To 3/8" Thick

3/16" X 5/32" V Notch

Coverage: average 50 ft<sup>2</sup> per gallon



Flooring Up To 1/2" Thick

1/4 X 3/16" V Notch

Coverage: average 35ft<sup>2</sup>/gal



Flooring Up To 3/4" Thick

& Plywood Subfloor

1/4" X 1/4" V Notch Trowel

Coverage: average 30ft<sup>2</sup>/gal

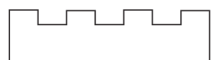
## FOR INSTALLATIONS THAT ARE FOR ADHESIVE ONLY AND DO NOT REQUIRE SUBFLOOR MOISTURE PROTECTION



Flooring from 1/4" to 3/8" Thick

3/16" X 5/32" V Notch

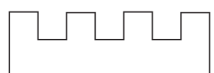
Coverage: average 50 ft<sup>2</sup> per gallon



Flooring from 3/8 to 5/8"

1/4 " X 1/8" square notch

Coverage: average 40 ft<sup>2</sup>/gal



Flooring > 5/8"

1/4 X 1/4" Square Notch Trowel

Trowel sizes are suggested to maximize adhesive transfer. Uneven subflooring may require the use of a patching or leveling compound or the use of a larger notched trowel.

## HEALTH AND SAFETY INFORMATION

**CAUTION WARNING:** IRRITANT, SENSITIZER.

**CONTAINS:** Diphenylmethane Diisocyanate, isomers and homologues.

May cause skin and respiratory sensitization. Causes eye/skin/ respiratory irritation. Harmful if swallowed.

Before using product read Safety Data Sheet (SDS).

Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

## FIRST AID

**EYES:** Hold eyelids apart and flush thoroughly with water for 15 minutes.

**SKIN:** Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water.

**INHALATION:** Remove to fresh air.

**Ingestion:** Do not induce vomiting. Dilute with water. Contact physician. In all cases contact a physician immediately if symptoms persist.

## HANDLING & STORAGE

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and laundry before reuse.

## CLEAN UP

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.

KEEP CONTAINER TIGHTLY CLOSED. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY.