



**DIVISION 9 - FINISHES**  
**Section 09 64 00 Wood Flooring**  
**Wood Parquet Flooring**

**Part 1 - General**

**1.01 Summary**

- A. This specification describes a one-component, low VOC in compliance with SCAQMD, Rule 1168 (tested per EPA Method 24), moisture cured polyurethane adhesive and vapor retarding membrane (all-in-one) for full surface bonding of wood flooring. The adhesive will tenaciously bond wood to most surfaces, including concrete, plywood, leveling and patching underlayments, that have been properly mechanically prepared.

**1.02 Quality Assurance**

- A. Manufacturing qualifications: The manufacturer of the specified product shall be ISO 9001/9002 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.
- B. Contractor qualifications: Contractor shall be qualified in the field of wood floor installations with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.
- C. Install materials in accordance with all safety and application conditions required by the manufacturer or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations.

**1.03 Delivery, Storage, and Handling**

- A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged material must be removed from the site immediately.
- B. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.
- C. Condition the specified product as recommended by the manufacturer.

**1.04 Job Conditions**

- A. Environmental Conditions: All applications are indoors. Minimum application temperature 60 ° F (15 ° C) and in case of radiant floor heating  $\leq 70$  ° F (20 ° C).
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to applying and handling of the specified acoustical system.
- C. Wood floor manufacturer's recommendations for installation, i.e. levelness, wood acclimation, wood moisture content, etc. must be followed.
- D. Maximum acceptable floor variation is 3/16 " in 10 feet.

**1.05 Submittals**

- A. Submit two copies of manufacturer's literature, to include: Product Data Sheets, and appropriate Material Safety Data Sheets (MSDS).

**1.06 Warranty**

- A. Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. No other warranties express or implied shall apply including any warranty of purpose. Sika shall not be liable under any legal theory for special or consequential damages. Sika shall not be responsible for the use of this product in a manner to infringe on any patent or any other intellectual property rights held by others.

## Part 2 - Products

### 2.01 Manufacturers

- A. **SikaBond-T21**, as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 is considered to conform to the requirements of this specification.

### 2.02 Materials

A. **SikaBond-T21:**

1. The wood floor adhesive shall be a unique permanently elastic, super strong, polyurethane adhesive that forms a tenacious bond to wood flooring, plywood subfloors, concrete and other common subfloor materials. Adhesive contains no water.

- B. Any primers, as required, recommended by the manufacturer of the specified product, approved by the engineer.

### 2.03 Performance Criteria

A. Properties of the uncured polyurethane adhesive:

1. Tack-Free Time: 45 - 60 minutes cured at 73° F (23° C) and 50 % RH
2. Consistency: spreads easily, holds ridges after troweling
3. Color: light brown
4. Density: 9.85 lbs/ gal (1.18 kg/ l)
5. Curing Rate: 1/6" / 24 hours (4.5 mm/ 24 hours) at 73° F (23° C) and 50 % RH.  
Floor may accept light foot traffic after 6 - 8 hours at 45 – 50 SF/ gal, after 12 hours at 30 – 35 SF/ gal, Sanding 18 hours after installation (depending on climatic conditions and adhesive layer thickness)
6. Shelf Life: 12 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between + 50° F and + 77° F (+ 10° C and + 25° C)
7. VOC 57 g/ l (tested per EPA Method 24)

B. Properties of the cured polyurethane adhesive:

1. Water vapor permeability:  $< 0.4 \text{ g/m}^2 \cdot 24\text{hour-mmHG}$   
(ASTM E-96, Wet Method)
2. Tensile strength: 150 psi, cured at 73° F (23° C) and 50 % RH
3. Shear strength: 150 psi, 1 mm adhesive thickness at 73° F (23° C) and 50 % RH
4. Elongation at Break: ~ 170 %, cured at 73° F (23° C) and 50 % RH
5. Shore "A" hardness: ~ 50 after 28 days at 73° F (23° C) and 50 % RH
6. Service Temperature: -40 ° F to +158 ° F

**Note: Tests were performed with material and curing conditions at 73° F (23° C) and 50 % RH**

## Part 3 - Execution

### 3.01 Surface Preparation

- A. The substrate must be clean, dry, sound and free of surface contaminants. Remove all traces of dust, laitance, grease, oils, curing compounds, form release agents and foreign particles by mechanical means, i.e. – shot blasting, grinding, sanding, etc., as approved by the engineer. Blow substrate free of dust using compressed air line equipped with an oil trap and vacuum. Maximum acceptable floor variation is 3/16 “ in 10 feet.

### 3.02 Mixing and Application

- A. Substrate:
  1. Concrete must be visibly dry. Inspect for any wetness at base of drywall or visible signs of moisture on concrete. Concrete and cement-based underlayments must be fully cured and free of any hydrostatic and/or moisture problems.
  2. Placement Procedure: Prime substrate if necessary based upon the recommendations of the manufacturer of the specified product, when field testing indicates need, and for a substrate with old well bonded adhesive or adhesive residue, as approved by the Engineer.
  3. **For use as an adhesive only:** apply the adhesive with a Sika-P5 trowel. Trowel size is recommended to obtain a proper coverage at approximately 45 – 50 SF/ gal. Larger sizes are acceptable. Trowels should be used at a 90° angle to subfloor to get stated coverages.  
**For use as an adhesive and membrane:** apply the adhesive with a Sika-SC+MB or ¼” x ¼” V-notch trowel. Trowel size is recommended to obtain a proper coverage at approximately 30 – 35 SF/ gal. Larger sizes are acceptable. Trowels should be used at a 45° angle to subfloor to get stated coverages. Applicator is responsible for periodic inspection of the trowel to check excessive wear. If the trowel is found to be defective it should be replaced immediately to assure recommended coverage. 100% substrate coverage and adhesive transfer is required to protect against damages from subfloor moisture.

Take care to place only enough adhesive to allow sufficient time to place wood into adhesive while the adhesive is still wet. Excessive amounts of adhesive may cause wood flooring to slide while placing. Always check coverage during installation.

4. For Engineered and Solid Hardwood applications:  
Maximum wood size: Solid wood < 8 “ wide, engineered wood < 14 “ wide  
Press the wood floor elements firmly into the adhesive so that the wood floor underside is sufficiently wetted. The elements can then be joined together using a rubber hammer with an impact block and/ or rubber mallet. Many types of wood floors have to be tapped from the top. Leave gaps at room perimeters and at any floor wall partition to allow wood flooring to move naturally – follow recommended guidelines from wood floor manufacturer. Spacers should be used to ensure perimeter space is maintained. The laying instructions of the wood floor manufacturer as well as standard construction rules must be observed.  
**Note:** Wood floor manufacturer’s requirements for room humidity levels and environmental control along with wood flooring acclimation requirements must be strictly followed.
5. The use of clamps to keep joints tight is recommended. For most projects a set of 5 will be adequate. If bowed boards are expected, Sika recommends placing several rows of straight boards across length of room and allow to cure overnight. These will form starter rows that will act as anchor for the clamps. For moderately bowed boards - clamp boards from the starter row. Clamp each individual row or several rows - if clamping several rows this must be done while adhesive is still wet, clamps can be loosened until successive rows are placed and clamped accordingly. Be careful not to over tighten. Best practice is to leave clamps in place when work is stopped for the day. For severely bowed boards - cut boards down to shorter pieces so that bow is removed. For situations where wood flooring does not rest flat. Sika recommends the use of weights to ensure intimate contact between the wood-adhesive-substrate. Leave clamps and weights on critical areas for a minimum of 12 hours.

### **3.03 Cleaning**

- A. Fresh, uncured adhesive, or fingerprints remaining on the wood floor surface must be removed immediately using a clean cloth and an appropriate urethane adhesive remover (be careful not to harm finish).
- B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

# SC-09

# SikaBond-T21

## Trowel-applied, Polyurethane Wood flooring Adhesive & Moisture Control (All-in-One)

Figure 1 – Full surface bonding

1. After proper substrate preparation pour sufficient SikaBond adhesive onto the substrate.



Fig. 1

Figure 2 – Troweling

1. **For use as an adhesive only:**  
using a notched P5 trowel spread the adhesive evenly at a minimum consumption of approximately 45 - 50 SF/ gal.

**For use as an adhesive and membrane:**

using Sika-SC+MB or ¼” x ¼” V-notch trowel spread adhesive evenly at minimum consumption of approximately 30 – 35 SF/ gal.

100% substrate coverage and adhesive transfer is required to protect against damages from subfloor moisture.



Fig. 2

Figure 3 – Placing wood

1. Place the wood without delay to required line and level, adjusting with a mallet and block if required.



Fig. 3

Figure 4 – Weighing of the wood flooring

1. Use straps and weights to hold the wood floor in place until the adhesive is fully cured.  
(typically when laying hardwood floors).

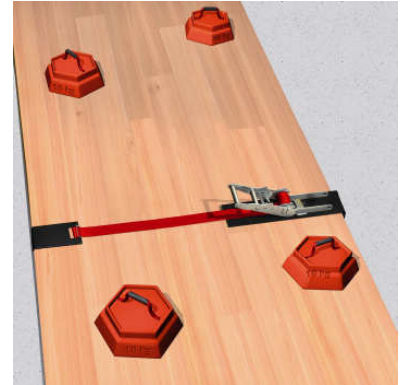


Fig. 4

Figure 5 – Clean up

1. Fresh uncured adhesive remaining on the wood floor surface (and the tools or hands) must be removed immediately with a clean cloth and an appropriate urethane adhesive remover (be careful not to harm finish).

