Product Data Sheet
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Identification no.
SikaBond T55

Construction

SikaBond®-T55

Trowel Grade Polyurethane Elastic Adhesive for Wood Flooring

Description

SikaBond®-T55 is a one-component, low-VOC, permanently elastic, super strong polyurethane adhesive for full surface bonding of wood flooring.

Where to Use

- Solid and engineered wood floors (strips, longstrips, planks, panels, boards) mosaic parquet, industrial parquet, wood paving (residential) as well as chipboards can be bonded.

Characteristics/ Advantages

- Bonds solid wood flooring up to 8 inches wide and engineered planks up to 14 inches wide directly to concrete with no length limitations.
- Eliminate sleepers and plywood over concrete and gypsum substrates.
- Formulated to be extremely easy to trowel, preventing arm strain.
- Fast curing - unfinished wood flooring can be sanded after 12 hours of cure time.
- Permanently elastic – allows planks to expand and contract without damage to the adhesive or substrate.
- Footfall-sound-dampening adhesive.
- Suitable for common types of wood floors.
- Especially good for problematic woods such as beech and bamboo.
- Suitable for bonding wood floors directly onto old ceramic tiles.
- Reduces stress on the substrate: the elastic, material-compatible adhesive reduces trans verse stress between the wood floor and the substrate.
- Suitable for in-floor radiant heat installation.
- Contains no water.

Green Rating

LEED® EQc 4.1 (100 g/L limit)	SCAQMD, Rule 1168 (100 g/L limit)	BAAQMD, Reg. 8, Rule 51 (120 g/L limit)
passes	passes	passes

Technical Data

Shelf Life	12 months from date of production if stored in undamaged unopened original sealed containers, in dry conditions and protected from direct sunlight at temperatures between 50°F and 77°F (10°C and 25°C).
Color	Tan
Packaging	5 gal. (18.93L) unit and 2.64 gal. (10L) unit
Chemical Base	1-component Polyurethane, moisture curing
Specific Gravity	11 lbs/gal (1.34 kg/l)
Skinning-/Laying Time	~ 45-60 minutes at 73°F(23°C) and 50% RH
Curing Rate	4.0 mm/24h at 73°F(23°C) and 50% RH. Floor may accept light foot traffic after 4 hrs. and sanded 12 hrs. after installation (depending on climatic conditions and adhesive layer thickness).
Sag Flow	Consistency: Spreads very easily, holds ridges after troweling.
Service Temperature	-40°F to +158°F

Typical Mechanical Properties

Shear Strength	145 psi using 1 mm adhesive thickness at 73°F(23°C) and 50% RH
Tensile Strength	217 psi at 73°F(23°C) and 50% RH
Shore A Hardness	35 (after 28 days)
Elongation at Break	~ 400% cured at 73°F(23°C) and 50% RH
VOC: g/l = 83	

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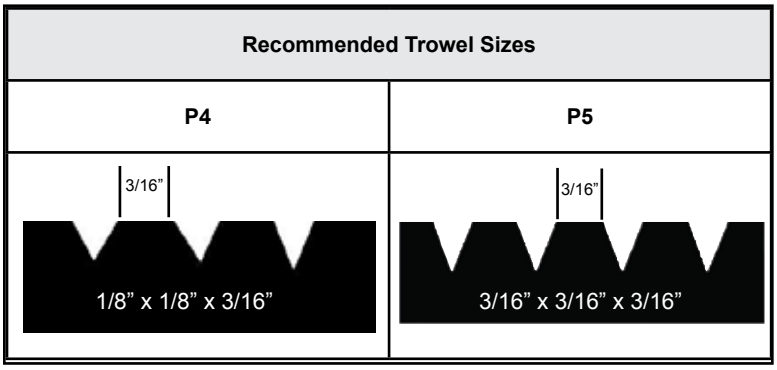
Application Details

Consumption

- **P4 Trowel:** approximately 55-60 sq. ft. per gallon. For use with engineered boards less than 7/8" thick and less than 6" wide and less than 6' long.
- **P5 Trowel:** approximately 50 sq. ft. per gallon. Required for all solid wood applications. And when requirements for P4 Trowel do not apply.
- For applications over gypsum-based subflooring, Sika requires the P5 trowel or larger only. In case of uneven substrates, it may be necessary to use a notched trowel with bigger notches (avert hollow sections). Coverage must be monitored to ensure accuracy of application. Trowel angle may prevent proper coverage.



Coverage of approximately: 55-60 sq. ft./gal

Coverage of approximately: 50 sq. ft./gal

Trowel size is recommended to obtain proper coverage. Larger sizes are acceptable. Check coverage during installation. Trowels should be used at the 90° angle to subfloor to get stated coverages.

Substrate Quality

Structurally sound, clean, dry, homogeneous, level, free from grease, dust and loose particles, paint, laitance, and other poorly adhering particles must be removed. Follow standard construction regulations.

Substrate Preparation

SikaBond can generally be used without priming on properly prepared, structurally sound - concrete, cement floors, chipboards, ceramic tiles, plywood and hardwood. For on-grade sub-floors Sika recommends the use of Primer MB for best protection against sub-floor moisture. Moisture testing is required by the wood flooring manufacturer for best results with the wood flooring products. Below grade applications are generally not recommended unless proper precautions are taken to protect the wood flooring from sub-floor and in-room humidity extremes. Sika recommends the use of Primer MB over any dry, gypsum based sub-flooring to enhance surface strength.

Preparation is a critical step in the installation process and will ensure a successful long term tenacious bond. All concrete, cement screed and gypsum based subfloors must be structurally sound, clean, dry, smooth, free of voids, projections, loose materials, oil, grease, sealers and other surface contaminants. Remove laitance or weak areas mechanically. For application over ceramic tiles it is necessary to grind tile surfaces and clean thoroughly with an industrial vacuum. For substrates with old well bonded adhesive or adhesive residue use Primer MB – see Primer MB data sheet for installation instructions and proper details.

If surface contains asphalt (cutback) adhesive follow the Resilient Floor Covering Institute "Recommended Work Practices" for removal. When the asphalt (cutback) adhesive is sufficiently removed use the Sika Primer MB to help promote adhesion to the subfloor – or use an industry approved levelling compound over the cutback residue. SikaBond T55 will adhere to most common patching/levelling compounds. Due to differences in asphalt based adhesive types and performance capabilities; applicator must verify that preparation of the surface is sufficient prior to using Primer MB or patch/level compound. For unknown substrates please contact Sika Technical Services for best practices at 800-933-SIKA.

Application Conditions/Limits

Substrate Temperature

During laying and until SikaBond®-T55 has fully cured, substrate temperature should be greater than 60°F (15°C) and in case of floor heating, less than 70°F (20°C). For substrate temperatures, the standard construction rules are relevant

Air Temperature

Room temperature between 60°F (15°C) and 90°F (35°C). For ambient temperatures the standard construction rules are relevant. Follow all wood floor manufacturer's acclimation and room temperature requirements.

Substrate Humidity

Moisture requirements are set forth to protect the wood flooring products that can expand and contract with different moisture levels. SikaBond-T55 is not affected by moisture or vapor transmission. The guidelines below are included to provide the best practices in moisture vapor testing that exists today. Permissible substrate moisture contents are listed on the chart below. For more information on the use of the CM method please contact Troy Corporation at 973-443-4200.

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Application	Moisture level requirements using Tramex method (%)	Moisture level requirements using CM method (%)
3/4" solid or engineered over concrete	4%	2.5%
3/4" solid or engineered over concrete with Primer MB layer	6%	4.0%
3/4" solid or engineered over in-floor heating over concrete	3%	1.8%
3/4" solid or engineered over gypsum-based	Tramex should not be used to measure gypsum	0.5%
3/4" solid or engineered over in-floor heating over gypsum-based	Tramex should not be used to measure gypsum	0.3%

The National Wood Flooring Association recommends the use of moisture testing devices that identify actual moisture content in percentages (%). For best results in measuring the moisture levels in cement based subfloor use the Tramex measuring device to find the highest reading in the application area and then run the CM method at that highest point to determine the worst case. As a general guideline for floors with no in-floor heating if the Tramex is below 4% the Primer MB will not be necessary and between 4% and 6% Primer MB will be required - however, the CM method must be used to make final determination of concrete moisture levels – use chart above. For moisture content and quality of substrates the guidelines of wood floor manufacturer must be observed.

Relative Air Humidity Between 40% and 70%

Application Instructions

Application

Read this product data sheet completely prior to starting installation. SikaBond®-T55 is applied to the properly prepared substrate directly from the pail and uniformly distributed by notched trowel. 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 hammer and 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 – fol low recommended guidelines from wood floor manufacturer. Spacers should be used to ensure perimeter space is maintained. Fresh, uncured adhesive remaining on the wood floor surface must be removed immediately with a clean cloth and urethane remover. 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.

Note: For Solid and Wide Engineered Hardwood applications: Sika recommends the use of clamps to keep joints tight – 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 then be loosened until successive rows are place 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 as a best practice the use of weights to ensure intimate contact between the wood-adhesive-substrate. Leave clamps and/or weights on critical areas for a minimum of 12 hours.

Clean Up

All tools should be cleaned immediately after use with Sika Equipment Cleaner or Sika Hand Cleaner Towels. Any adhesive that is permitted to cure on the tool will need to be removed by mechanical means. Use a dry towel and Sika Hand Cleaner Towels to removed adhesive from pre-finished wood surface before it cures. Finger prints or small amounts of adhesive residue can be removed from pre-finished wood using the Sika Hand Cleaner Towels. Sika Hand Cleaner Towels use a citrus based cleanser that will not harm the floor finish. Remove any adhesive residue from hands using the Sika Hand Cleaner Towels.

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Potlife (max. open time) ~ 45 minutes

Limitations

- Maximum wood size: Solid wood < 8” wide and Engineered wood < 14” wide.
- P5 trowel or larger must be used with all solid woods and when applying over gypsum-based subfloor.
- Room temperatures should be between 50°F and 90°F during installation unless otherwise specified limitations by wood flooring manufacturer.
- Do not use on wet, contaminated or friable substrates.
- When needed Sika recommends the use of Portland Cement based patching and levelling compounds for best results.
- Gypsum based sub-floors are very susceptible to excess moisture and will be degraded if exposed to excess moisture from below or above.
- Below grade installations are typically more difficult to control moisture and room humidity levels – if this cannot be done sufficiently then below grade applications should use structurally sound Engineered hardwood only.
- Do not use in areas subject to hydrostatic head or in areas subject to secondary source of moisture.
- Do not use over concrete with curing compounds, sealers or other surface treatments that could impact the adhesion.
- This adhesive will not prevent moisture related damage to wood flooring installations.
- Sub-floor should be level – do not use adhesive as a levelling agent.
- Cutback or other asphaltic based residue should be removed.
- Chemically treated woods (ammonia, wood stain, timber preservatives, etc.) and woods with high oil content must be tested for adhesion prior to application.
- Adhesive should be kept above 60°F for best workability.
- Sufficient ambient moisture is necessary for proper curing.
- Solid wood applications are best performed by an experienced installer.
- When bonding solid wood Sika recommends the use of straps to fully connect tongue and groove – especially when wood pieces are not perfectly straight – ensure starter rows are set and properly cured to handle tension from straps.
- Installations over radiant heat require that slab temperature be kept below 70°F during installation and for 48 hours after installation – then raised slowly up to final desired temperature. Follow wood floor manufacturer’s temperature guidelines.

Wood floors in non-insulated areas or areas without a damp proof membrane, must only be installed after the application of Sika® Primer MB to control the moisture, if within product limitations. For detailed instructions consult the Product Data Sheets or contact our Technical Service. In case of chemically pre-treated types of wood floors (e.g. ammonia, wood stain, timber preservative or woods that have been pre-sealed on the back side) and woods with high oil content SikaBond should only be used if adhesion tests are run by applicator prior to starting application. Do not use on PE, PP, TEFLON, and certain plasticized synthetic materials. (Carry out pre-trials). Some primers can negatively influence the adhesion of SikaBond (pretrials suggested). Do not expose SikaBond to alcohol; this will impact the curing of the SikaBond.

Health and Safety Information

Protective Measures

To avoid rare allergic reactions, we recommend the use of butyl rubber / nitril rubber gloves. Change soiled work clothes and wash hands before breaks and after finishing work. Important Notes: Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities. Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.

Visit our website at www.sikaconstruction.com **1-800-933-SIKA NATIONWIDE**

Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537