

PRODUCT DATA SHEET

SikaBond®-T55

Trowel Grade Polyurethane Elastic Adhesive for Wood Flooring.

PRODUCT DESCRIPTION

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

USES

SikaBond®-T55 may be used to bond solid and engineered wood floors (strips, longstrips, planks, panels, boards), mosaic parquet, industrial parquet, wood paving (residential) and chip boards to concrete, mortar, and old existing tiles.

CHARACTERISTICS / ADVANTAGES

- 400 % Elongation
- Bonds up to 3/4" solid and engineered wood
- Low-odor
- Easy to trowel formulation
- Fast curing - unfinished wood flooring can be sanded after 12 hours of cure time

- Crack bridging
- Suitable for most 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
- Suitable for in-floor radiant heat installation
- Footfall-sound-dampening adhesive
- Contains no water
- Eliminate sleepers and plywood over concrete and gypsum substrates
- Permanently elastic – allows planks to expand and contract without damage to the adhesive or substrate

ENVIRONMENTAL INFORMATION

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

Chemical Base	1-component Polyurethane, moisture curing
Packaging	5 gal. (18.93 L) unit
Color	Tan
Shelf Life	12 months from date of production if stored in undamaged, unopened, original sealed containers.
Storage Conditions	Store in dry conditions and protected from direct sunlight at temperatures between 50 °F and 77 °F (10 °C and 25 °C).



Density 11 lbs/gal (1.34 kg/l)

TECHNICAL INFORMATION

Shore A Hardness	35	(cured for 28 days)
Tensile Strength	217 psi	(cured at 73 °F (23 °C) and 50 % RH)
Elongation at Break	~ 400 %	(cured at 73 °F (23 °C) and 50 % RH)
Shear Strength	145 psi	(using 1 mm adhesive thickness cured at 73 °F (23 °C) and 50 % RH)
Service Temperature	-40 °F (-40 °C) to 158 °F (70 °C)	

APPLICATION INFORMATION

Coverage

FOR USE AS ADHESIVE ONLY			
Flooring Type		Trowel	Coverage
Solid	Max Thickness: Unlimited Max Width: Unlimited	P5: 3/16" x 3/16" x 3/16" Flat V-notch 	45-50 sq.ft. per gal.
Engineered	Thickness: Unlimited Max Width: Unlimited		
FOR USE WITH UNDERLAYMENT			
Flooring Type		Trowel	Coverage
Cork or rubber underlayment		1/16" x 1/16" Square notch* 	90 sq.ft. per gal.

*Recommended trowel size for 3.2mm material

- Coverage must be monitored to ensure accuracy of application. Trowel angle may prevent proper coverage.
- Applicator is responsible for periodic inspection of the trowel to check for excessive wear. Worn trowels must be replaced immediately.
- 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.
- Trowel size is recommended to obtain proper coverage larger sizes are acceptable. Excessive amounts of adhesive may cause wood flooring to slide while placing check coverage during installation.
- P5 trowels should be used at 90° angle
- Substrate Quality: Structurally sound, clean, dry, homogeneous, even, free from grease, dust and loose particles, paint, laitance, and other poorly adhering particles must be removed.
- The P5 trowel available from Sika.

Sag Flow

Consistency: Spreads very easily, holds ridges after troweling.

Ambient 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.

Relative Air Humidity

Between 40 % and 70 %

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

Substrate Moisture Content

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.

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 Sika® 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 gypsumbased	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 Sika® MB will not be necessary and between 4 % and 6 % Sika® 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.

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).
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Skin Time / Laying Time	~ 45–60 minutes at 73 °F(23 °C) and 50 % RH
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APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

SikaBond®-T55 can generally be used without priming on properly prepared, structurally sound concrete, cement floors, chipboards, ceramic tiles, plywood and hardwood. For on-grade subfloors Sika® recommends the use of Sika® 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 Sika® 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 Sika® MB – see Sika® MB data sheet for installation instructions and proper details.

If the 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® 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 Sika® MB or patch/level compound. For unknown substrates please contact Sika® Technical Services for best practices at 1-800-933-SIKA.

APPLICATION METHOD / TOOLS

Read and understand data sheet completely before beginning installation. Follow all industry standards, as well as hardwood and bamboo flooring manufacturer's recommendations for floor flatness, acclimation, design, layout, application, etc. of wood flooring material. If jobsite conditions are outside of flooring manufacturer's recommendations, take necessary corrective actions as recommended by the floor manufacturer to address these issues. Whether the moisture content of substrate exceeds or is within the manufacturer's recommendations, to address current or possible future subfloor moisture, apply SikaBond®-T55 as directed. SikaBond®-T55 is applied to the properly prepared substrate directly from the pail and uniformly distributed by trowel as described on this Product Data Sheet. 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 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 – follow recommended guidelines from wood floor manufacturer. Spacers should be used to ensure perimeter space is maintained. The wood flooring manufacturer's laying instructions, acclimation requirements, room humidity/environmental control requirements as well as standard construction rules must be observed.

Removal

All tools must be cleaned immediately after use with SikaBond® Remover or standard industry cleaning solvent. Any adhesive that is permitted to cure on the tool will need to be removed by mechanical means. SikaBond® Remover can be used to remove uncured or cured adhesive and fingerprints from wood surface.

CLEANING OF TOOLS

Clean all tools and application equipment immediately after use with Sika® Remover-208. Once cured, residual material can only be removed mechanically.

LIMITATIONS

- Wood limitations can be found in coverage section

- P5 trowel or larger must be used with all solid woods and when applying over gypsum-based subfloor.
- Room temperatures should be between 60 °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® 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®.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

53 g/L

LEGAL DISCLAIMER

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

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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 Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR 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.**

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Product Data Sheet

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