

**Product Data Sheet**  
Edition 10.13.2010  
Identification no. IT 54780  
SikaBond-T54 FC

## SikaBond®-T54 FC

Solvent free, trowel-applied polyurethane wood flooring adhesive

<b>Description</b>	SikaBond-T54 FC is a one component, fast curing, solvent free, elastic adhesive for full surface bonding.								
<b>Where to Use</b>	SikaBond-T54 FC may be used to bond solid and engineered wood floors (strips, longstrips, planks, panels, boards), mosaic parquet, industrial parquet, wood paving (residential) as well as chipboard.								
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ Solvent free</li> <li>■ 500% Elongation</li> <li>■ Low odor</li> <li>■ Easy to trowel</li> <li>■ Fast curing</li> <li>■ Suitable for most common types of wood</li> <li>■ Especially good for problematic woods such as beech and bamboo</li> <li>■ Suitable for bonding wood floors directly onto old ceramic tiles</li> <li>■ Suitable for in-floor radiant heat installation</li> <li>■ Footfall sound - dampening adhesive</li> <li>■ Reduces stress on the substrate</li> <li>■ Contains no water</li> </ul>								
<b>Green Rating</b>	<table border="1"> <tr> <td>LEED® EQc 4.1 (100 g/L limit)</td> <td>SCAQMD, Rule 1168 (100 g/L limit)</td> <td>BAAQMD, Reg. 8, Rule 51 (120 g/L limit)</td> </tr> <tr> <td>passes</td> <td>passes</td> <td>passes</td> </tr> </table>	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		
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### Technical Data

<b>Shelf Life</b>	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).
<b>Color</b>	Parquet brown
<b>Packaging</b>	2.64 gal. (10 L) unit
<b>Chemical Base</b>	1-component Polyurethane, moisture curing
<b>Specific Gravity</b>	10.43 lbs/gal (1.25 kg/L)
<b>Skimming/Laying Time</b>	~ 60 minutes at 73°F (23°C) and 50% RH
<b>Curing Rate</b>	4.5 mm/24h at 73°F (23°C) and 50% RH. Floor may accept light foot traffic after 6-8 hrs. (depending on climatic conditions and adhesive layer thickness).
<b>Sag Flow</b>	Consistency: Spreads easily, holds ridges after troweling.
<b>Service Temperature</b>	-40°F to +158°F
<b>Mechanical Properties</b>	
<b>Shear Strength</b>	~ 116 psi using 1 mm adhesive thickness at 73°F (23°C) and 50% RH
<b>Tensile Strength</b>	150 psi at 73°F (23°C) and 50% RH
<b>Shore A Hardness</b>	~ 30 (after 28 days)
<b>Elongation at Break</b>	~ 500%
<b>VOC (g/l)</b>	30.38



SikaBond®-T54 FC 1/5

### 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.

#### Recommended Trowel Sizes

Trowel size is recommended to obtain proper coverage. Larger sizes are acceptable. Check coverage during



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

Coverage of approximately:  
50 sq. ft./gal

Installation. Rows 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-T54 FC 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-T54 FC 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 1-800-933-SIKA.

#### Application Conditions/Limits

##### Substrate Temperature

During laying and until SikaBond-T54 FC 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-T54 FC 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.

SikaBond®-T54 FC 2/5

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-T54 FC 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 – follow 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 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 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 remove 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.



SikaBond®-T54 FC 3/5

## 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 (pre-trials suggested). Do not expose SikaBond to alcohol; this will impact the curing of the SikaBond.



SikaBond®-T54 FC 4/5

Construction

### Health and Safety Information

<b>Caution</b>	<b>IRRITANT.</b> Contains bis (2-ethylhexyl) adipate (CAS: 103-23-1). May cause eye and skin irritation. Harmful if swallowed. <b>WARNING:</b> This product contains a chemical known to the State of California to cause cancer AND reproductive harm.
<b>First Aid</b>	<b>Eyes</b> – Hold eyelids apart and flush thoroughly with water for 15 minutes. <b>Skin</b> – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. <b>Inhalation</b> – Remove to fresh air. <b>Ingestion</b> – Do not induce vomiting. Dilute with water. Contact physician. <b>In all cases contact a physician immediately if symptoms persist.</b>
<b>Handling &amp; Storage</b>	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 launder before reuse.
<b>Clean Up</b>	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 local, state, and federal regulations. In case of emergency, call Chemtrec 1-800-424-9300.

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**LIMITED WARRANTY:** 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

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1-800-933-SIKA NATIONWIDE

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

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SikaBond®-T54 FC 5/5