Technical Data Sheet (TDS)

PUK-455 Wide Plank Adhesive

Urethane Adhesive for Wide Solid Planks

Special features

- Very high shear strength
- No water or solvents
- Fast setting

Product Description

STAUF PUK-455 is a urethane-based, high-strength adhesive for professional wood flooring installation. It is specially formulated for wide plank floors.
PUK-455 has an extremely high shear strength to help control common cupping problems associated with wide-width solid flooring.
PUK-455 spreads easily and has a non-slump formula to allow the ridges to bridge gaps between wood floor and the subfloor. Since there is no water or solvent present it will not cause dimensional changes to wood flooring.
PUK-455 allows fast installation even with complicated patterns due to its strong green grab. There is no flash time required, so installation can commence immediately. Rolling is neither required nor recommended. It offers superior flexibility and is designed to keep the flooring in place, yet allow for normal movement during seasonal changes to the flooring.

Pre-Installation Checklist

A successful installation requires proper preparation of the subfloor. Read and understand all applicable guidelines and technical data sheets before installation. Follow industry standards and flooring manufacturers' recommendations for subfloor moisture content, design, layout, and application of flooring materials. The backing of all flooring material must be solid, sound, and free of anti-adherents. All slab constructions must meet the specific requirements of the floor covering to be installed.

Sub Floor Examination

Prior to installation, the subfloor must be checked according to NWFA installation guidelines. It must be solid and sound, flat, permanently dry, clean, free of chaps, indentations, and anti-adherents, and resistant to pressure and tension. The moisture content of all floors must be measured before installation. Moisture content in concrete subfloors must be below 3#/24hr/1000SF using the Calcium Chloride Test or below 75% RH using an in-situ probe per ASTM F1869 and F2170.
All wood floors should have 6-9% moisture content at installation. There should be no more than a 4-5% variance in moisture content between the wood flooring and any wood subfloor. See NWFA guidelines and the wood flooring manufacturer's recommendations for details.
No moisture testing is required for installation of engineered or solid wood floor in new construction as long as a new STAUF #12 clip-on blade is used for every pail, there is 100% coverage of the adhesive on the subfloor, the spread rate does not exceed 35 SF/gal and concrete floors are at least 30 days .

Sub Floor Preparation

Depending on the type and condition of the subfloor, a mechanical treatment (e.g., mechanical brushing, grinding, or sanding) may be required. The intensity of such work must be determined on-site by the installer. Dust, paint, residual adhesives, dirt, oil, grease, sealers, curing compounds, waxes, silicates, laitance, or other surface contaminants must be removed by suitable means. Cleaning the surface with an industrial vacuum cleaner is recommended. Cracks and gaps must be filled with concrete crack filler unless they are expansion joints. Level when necessary to 3/16 inches within 10 feet. Heated subfloors, gypcrete, and lightweight concrete must be primed. Fast-curing cementitious leveling or patching compounds might reduce the flash and work time of water-based products due to absorption and should be primed.

Installation Procedure

Spread the adhesive with the appropriate notched trowel. Avoid excessive adhesive thickness by passing the trowel evenly through the adhesive at a 45° angle. There is no flash time, so installation should begin immediately. Lay the flooring into the adhesive, correctly position it and press down firmly. Rolling is neither required nor recommended. Be sure to check the boards at regular intervals to ensure a good adhesive transfer from subfloor to flooring is achieved. Bowed boards or boards over low spots should be weighted down until the adhesive cures.

Limitations

When using other than STAUF products in conjunction with STAUF primers, sealers, leveling compounds, or adhesives, STAUF denies any and all responsibility for any ensuing problems and/or damages without prior written authorization from STAUF.
Do not install solid wood below grade. Do not use on concrete with curing agents or sealers except approved STAUF Sealers. Do not use on damp subfloors. Do not install wood flooring with a moisture reading above 9%. Do not use adhesive as a leveling material.
This adhesive is mold and mildew-resistant and water resistant when fully cured. However, it will not prevent moisture-related damages to wood flooring unless it is used as a moisture barrier (if applicable) within the limitations set forth in the Technical Data Sheet.
In case of an accident, injury, spill, or exposure, see SDS for information. Consult the Technical Data Sheet at www.staufusa.com for updated information.
The foregoing representations are based on the results of our most current product and material testing within a controlled environment and are of a non-obligatory advisory nature only. As such, they do not constitute an express or implied warranty of any kind including the Warranty of Merchantability and/or Fitness for a Particular Purpose. Because we have no control over the actual quality of workmanship, materials used, and worksite conditions, STAUF USA LLC will in no event be liable for any incidental and/or consequential damages. Therefore, we strongly recommend that prior on-site testing be conducted to refer to and study the suitability of the product for the intended purpose. With the release of this Technical Information Sheet, all its prior versions become invalid. For warranty and warranty disclaimer information please see our Limited Lifetime Warranty @ www.staufusa.com

General Features

- Moisture cured urethane
- LEED qualified
- Contains no water
- High shear strength
- Contains no solvents
- Contains no VOC (calc. per CA Rule 1168)
- Certified green
- Certified very low emission
- Nonflammable
- High solids content
- Ozone friendly
- Isocyanate-based Urethane for strong bond
- Freeze/thaw stable

Installation Features

- Grabs quicker, less slippage
- Wet lay - no flash time required
- Superior green grab
- Non-slump formula
- Bridges normal subfloor variations
- Very low odor
- No rolling required
- Spreads easily
- Higher temp and RH will shorten drying time
- Cleans with urethane cleaner

Long Term Features

- Resistant against aging
- Remains elastic
- Suitable for radiant heat systems with primer
- Allows normal dimensional changes in wood flooring
- Waterproof when cured
- Eliminates hollow spots
- Stronger shear strength reduces cupping

Approved Flooring

- Planks, any width

Approved Subfloors

- Concrete Slabs
- OSB (underlayment grade)
- Plywood (underlayment grade)
- Cured Leveling Compounds
- Radiant Heated Subfloors

Approved Sealers

- STAUF ACS-210 True-Seal
- STAUF ERP-270 Perma-Seal
- STAUF VPU-155 S Urethane Sealer

Approved Leveling Compounds

- STAUF ULC-500 Universal Leveling Compound

Approved Trowels and Spread Rate

- Moisture Barrier-#12: up to 35 SF/gal. (Must use one per pail)
- Solid Floors-#17 (1/4 x 1/4 x 1/4 in + 7/16 x 7/16 in) up to 40 SF/gal.

Cure Time until Normal Traffic

- Approx. 12 hours

Clean-Up

- Use acetone while wet
- Product will damage surfaces - clean while wet

Temperature Range during Installation

- 50-90F (10-32C)

Relative Humidity Range during Installation

- 30% - 80%

Packaging Size

- 3 gal. Plastic Pail
- 48 per pallet

Color

- Beige

pH value of concrete

- Resistant up to 14

Storage

- Dry

Shelf Life

- 12 Months in original, unopened container

Shear Strength

- 682 psi (4.7 N/mm²)

Open Time	30% R/H	50% R/H	80% R/H
50F/10C	60 mins	50 mins	40 mins
70F/21C	50 mins	40 mins	30 mins
90F/32C	40 min.	30 mins	20 mins