



HELMITIN
QUALITY ADHESIVE SOLUTIONS

HELMICOL 3416

CONDUCTIVE POLYURETHANE FLOORING ADHESIVE

Product Description

HELMICOL 3416 is a two-component solvent-free, polyurethane adhesive formulated to permanently install conductive resilient tile and sheet flooring, rubber tile flooring and rubber sheet flooring. HELMICOL 3416 has been formulated to produce a superior, flexible bond required for use in high traffic applications. May be used over properly prepared porous and non-porous surfaces such as concrete, underlayment grade plywood, cementitious based patching compounds and levelers.

Benefits

- ✓ Non-Flammable
- ✓ Solvent-free
- ✓ Excellent moisture and alkali resistance
- ✓ Excellent plasticizer resistance
- ✓ When dry, does not promote growth of mold or mildew
- ✓ Low odor
- ✓ Excellent indentation resistance
- ✓ Sets to a hard setting, permanent bond
- ✓ FloorScore® Certified by SCS Global Services
- ✓ Health Product Declaration

LEED Points Contribution

MR Credit Regional Materials
IEQ Credit 4.1 Low-Emitting
Materials Adhesives and Sealants

LEED Points

Up to 2 points
1 point

Testing Methods

- Freeze-thaw stability (ASTM D7149)
- Shelf Life (ASTM D1337)
- Adhesive Shear Strength (ASTM D6004)
- 90° Peel Resistance (ASTM D6862)
- Plasticizer Resistance (ASTM D7888)
- Caster Chair (ISO 4918)
- Heat Aged Expansion/Contraction

Physical Properties

Weight/Gal:	9.0 lb mixed	
Color:	Black	
Working Time:	30 - 40 minutes at 75°F. Higher temperatures will result in shorter pot life	
VOC:	<12 grams/liter per SCAQMD Rule 1168	
Mix Ratio:	Part A	Part B
Weight	100	33
Volume	3.0	1.0
Freeze-thaw:	Freeze-thaw stable. Allow adhesive to acclimate to normal room temperature	
Shelf Life	18 months unopened properly stored containers	

Coverage

TROWEL	SPACING	COVERAGE
	1/16" X 1/16" X 1/16" Square Notch	125 - 150 square feet per gallon
	1/16" X 1/16" X 1/16" V-Notch	165 - 200 square feet per gallon
	3/64" X 3/64" X 3/64" U-Notch	165 - 200 square feet per gallon
	1/32" X 1/16" X 1/32" U-notch	225 - 250 square feet per gallon

Note: 3/64" X 3/64" X 3/64" U-notch trowel is available from Helmitin.

Packaging

- HELMICOL 3416 is available in 1-gallon units.

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Toll Free: 877.823.2624
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helmitin.com

*SEE SDS FOR REGULATORY INFORMATION

Acclimation

The area to receive flooring shall be fully enclosed, weather tight, with an installed operating HVAC system. The installation area, flooring materials and adhesive must be acclimated at a temperature between 65° – 85°F for 48 hours prior to, during and after installation. The relative humidity of the installation area shall be maintained between 35 – 55% per ASTM F710 (Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring).

Surface Preparation

HELMICOL 3414 can be used on porous and non-porous surfaces free of moisture. Surface to be covered must be dry, clean and smooth. Any foreign materials present such as paint, grease, oil, pen markings, adhesive residues, etc. that may prevent a proper bond or migrate to the surface causing a stain must be removed. Adhesive can be used on all grades of concrete on, above or below grade in the absence of moisture. Installation of a 10 mil (0.010") or greater effective moisture retarder is recommended directly under all on and below grade concrete floors with its integrity insured. Concrete shall be prepared according to the recommendations outlined in ASTM F710 (Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring). Concrete floors shall be free from crazing, dusting, spalling and any curing or sealing compounds. Concrete floors shall be tested for moisture according to the latest revision of ASTM F2170 (Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes) and ASTM F1869 (Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride). Wood floors must be double construction with a 1" minimum thickness, structurally sound, securely fastened and free from deflection/spring. Top layer of wood shall be underlayment grade plywood. Cracks and uneven surfaces must be filled with an approved cement-based patching compound.

Application

Pour the entire contents of the Part B container into the Part A container. Using a low speed mixer, thoroughly mix the contents until a smooth, even colored consistency is achieved. Immediately pour the entire contents onto the substrate. Do not allow mixed adhesive to set in container.

Spread adhesive evenly using the recommended trowel. Refer to above chart for trowel notch recommendations. Hold trowel at a 60° angle. Replace trowels with worn notches. Do not re-notch worn notches.

Note: The $\frac{3}{16}$ " x $\frac{3}{16}$ " x $\frac{3}{16}$ " U-notch trowel can be used as an alternative to the $\frac{1}{8}$ " x $\frac{1}{8}$ " x $\frac{1}{8}$ " V-notch trowel. Contact Helmitin for more information.

Once applied, the working time of the adhesive is 30 - 40 minutes (higher room temperatures will result in shorter open times). Allowing a 5-minute open time before positioning flooring will help reduce tile shifting and adhesive bleed through at tile joints. Kneeling boards are recommended when working on tile. To insure transfer of adhesive to back of flooring, flooring material must be positioned while adhesive is wet. When installing sheet flooring, the use of a push board will help remove excess air under the flooring. Immediately roll flooring in both directions with a 100 lb three-section roller.

Post Installation

Prevent all traffic for a minimum of 8-hours. Prevent heavy traffic and rolling loads for a minimum of 24 - 48 hours after installation. Do not wash or begin maintenance procedures on the floor for a minimum of 5-days after installation. Lower temperatures will result in longer cure times.

Clean-up

Remove wet adhesive immediately with a clean cloth dampened with mineral spirits, isopropanol or acetone. Cured adhesive is very difficult to remove. Do not apply solvents directly to flooring. **Use caution when handling flammable solvents.**

General Warranty & Precautions

Helmitin warrants its private label adhesive formulations to be free of all manufacturing defects. The warranty period shall be in place for one (1) year from the date of installation and will also be guided by the date of manufacture to insure the integrity of the formulation and that proper storage and shipment of same has taken place. Please contact Helmitin for detailed warranty information and information for Helmitin's "Match It ASTM F2170 Moisture Warranty." Do not wash or begin maintenance procedures on the floor for a minimum of 5 days after installation to allow the adhesive to properly cure. Carefully read and follow all precautions and warnings. Keep out of reach of children. For complete safety information, refer to Safety Data Sheet (SDS) available from Helmitin Inc.

Statements and recommendations made herein are based on tests believed to be reliable. However, no guarantee of their accuracy or completeness is made. Unless otherwise provided in written contract, products are sold without warranties or conditions expressed or implied. Purchasers must make their own tests to determine the suitability of our products for their particular purpose.

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