

FORBO EZ-ON 100™ ADHESIVE TECHNICAL DATA

RECOMMENDED FOR USE WITH:

- Marmoleum® Modular, Marmoleum® Modular Striato, Marmoleum® Composition Tile (MCT)

SPECIFICATIONS:

- FloorScore Certified by SCS Global Services
- Moisture Cured Urethane
- Isocyanate Free
- Non-flammable
- Storage: Do **NOT** Freeze. Store at minimum temperature of 65° F (18.3° C) and a maximum of 95° F (35° C).
- Shelf life: 18 months in unopened container
- Appearance and Odor: Tan color that dries clear with little to no odor
- VOC Emissions: Low VOC
- Spread Rate: Approximately 250 square feet per gallon
- Available in four-gallon units only



SUBSTRATE & TESTING REQUIREMENTS:

- Forbo EZ-ON 100™ can be used on all grade levels of concrete. All concrete substrates must be prepared in strict accordance with the conditions set forth in the latest version of ASTM F 710. The substrate must be dry, clean, smooth, and structurally sound.
IMPORTANT! Forbo EZ-ON 100™ can be used on both old and new concrete substrates. While Forbo EZ-ON 100™ is suitable for use over substrates where no vapor retarder is present, it is NOT recommended for use on any substrates demonstrating symptoms of or with a history of moisture related issues. Forbo EZ-ON 100™ is not warranted against issues of hydrostatic pressure, water intrusion or catastrophic flooring. In situations exhibiting or with pre-existing issues of flooring failure where no vapor retarder is present, Forbo recommends consulting with a concrete specialist who may be able to advise on the most appropriate remedial measures to render the substrate suitable to receive commercial resilient flooring. For additional information, contact Forbo's Product Support and Education Services.
- Concrete surfaces that are hard troweled or tight must be mechanically abraded in order to create the necessary level of porosity for adequate adhesive performance prior to installation.
- The concrete porosity should be determined by testing in strict accordance with the latest version of ASTM F 3191. Testing shall be conducted on the final concrete substrate profile or assembly as it will exist at the time of installation. This includes any patching or leveling compounds that may be in use. Place a single drop of water (approximately 0.05 mL) on the substrate surface using a water dropper, straw, etc. Water should penetrate into the slab within 5 – 15 minutes to be considered porous. Any concrete substrates where water takes longer than 15 minutes to penetrate or does not penetrate should be considered non-porous. If water penetrates too rapidly or too slowly, adjustments to the concrete surface must be made to provide the proper porosity level. Concrete substrates determined to be overly porous, dusty or generally insufficient may need to be primed using a primer according to the manufacturer's recommendations to regulate the porosity level of the slab and to meet the porosity conditions noted above.
IMPORTANT! To avoid adhesive displacement and to allow immediate occupancy, appropriate open time for the adhesive must be observed. This is essential to allow much of the water in the adhesive to be drawn out by evaporation and/or absorption, prior to placing the material into the adhesive. Floors properly installed over concrete substrates that are considered porous when tested in accordance with the latest version of ASTM F 3191 may be occupied 45 minutes following the completion of installation. Floors properly installed over concrete substrates that are considered non-porous when tested in accordance with the latest version of ASTM F 3191 may be occupied 90 minutes following the completion of installation.
- The concrete surface must be dry and have a value of 5 or less when tested in strict accordance with the latest version of ASTM F 2659 using a surface moisture meter such as Tramex CME-4 or equivalent.
- The surface pH of the concrete must not exceed a pH of 12.0. Concrete surfaces with pH readings less than 8.0 or above 12.0 will require remediation prior to installation.

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- Conduct adhesive mat bond testing before beginning the installation. Adhesive mat bond testing can identify potential bonding problems and is essential for ensuring the integrity of the flooring system prior to the installation. Adhesive mat bond tests should be conducted using the adhesive(s) and material(s) to be used on the project **after** all remediation and/or preparation work has been completed. Testing shall be conducted on the final concrete substrate profile or assembly as it will exist at the time of installation. This includes any patching or leveling compounds that may be in use. Spread Forbo EZ-ON 100™ using a 1/16" x 1/16" x 1/16" square notch trowel and allow the correct open time based on site conditions. It is required to allow the adhesive to build body, but not to flash off or dry. Install the material and roll with 100 lb. roller to ensure proper adhesive transfer. Proper placement and rolling will result in a complete "explosion" of the trowel ridges, creating a continuous flat film of adhesive on the substrate and on the material backing. Wait 45 minutes. Near the edge of the material, use the edge of a steel seam roller and with some force, to make a line on the material to try to displace the adhesive. Make a cut next to the line and remove the strip. Evaluate the adhesive where the material was removed. There should be 100% complete transfer of the adhesive and no displacement of the adhesive from the line. If there is displacement, wait another 5 – 10 minutes and repeat. Continue to repeat this step until there is no displacement of adhesive. This will also determine the amount of time required before occupying the space. Conduct adhesive mat bond tests by adhering 3' x 3' squares of material, following Forbo's installation guidelines, in various locations throughout the area where flooring is to be installed. Although the number of tests required may vary, enough tests should be performed to allow an evaluation of the entire area where material will be installed. A good rule of thumb is one mat bond test for every 1,000 square feet. This will help identify the effects of the site specific conditions that will influence the open time and working time of the adhesive. There are five main site conditions that influence open time and working time of adhesives: surface dryness, porosity of the substrate, ambient temperature, ambient humidity and air flow. Be sure to conduct mat bond tests on **ALL** substrates.

INSTALLATION GUIDELINES:

1. Areas to receive material should be clean, fully enclosed and weather tight. The permanent HVAC should be fully operational and controlled and set at a minimum temperature 65° F (18.3° C). If this is not possible, the areas should be acclimated and controlled by means of temporary HVAC to the service level conditions expected during occupancy. The temperature should range from 75° F $\pm$ 10° F (23.9° C $\pm$ 5.5° C) with a 40% - 65% ambient relative humidity. These conditions **MUST** be established at least seven days prior to beginning the installation, maintained during the installation, and continued for at least seven days following the installation.
2. The substrate must be free of all foreign materials including, but not limited to, dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, film-forming curing compounds, silicate penetrating curing compounds, sealing, hardening, or parting compounds, alkaline salts, excessive carbonation or laitance, mold, mildew, and other foreign materials that might affect the quality of bond to the substrate.
3. Thoroughly stir adhesive before use. **DO NOT** shake adhesive or mix with an electric mixer. Manually stir only.
4. Trowel recommendation: 1/32" x 1/16" x 1/32" fine notch trowel. Replace the trowel when proper coverage is no longer attainable.
5. Spread the Forbo EZ-ON 100™ adhesive onto the floor. The adhesive will self-level as it sets up on the substrate.
6. The open time and working time of Forbo EZ-ON 100™ will vary depending on the ambient temperature and ambient relative humidity of the space. Follow the chart below for open time (shown in hours) and working time (shown in minutes). A general indication of proper open time is when a firm touch produces no transfer of adhesive to the finger.

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IMPORTANT! When the adhesive is touched at the optimal open time, there will be an oily residue noticed on the finger. As the adhesive cures, this residue will dissipate. If there is no oily residue, the adhesive is no longer workable and will no longer bond to the material backing.

Relative Humidity							
Temperature			OPTIMAL RANGE				
	30%		40%	50%	60%	70%	80%
	60°F (16°C)	Open = 100 min. Work = 6 hrs.	Open = 90 min. Work = 6 hrs.	Open = 80 min. Work = 6 hrs.	Open = 75 min. Work = 6 hrs.	Open = 72 min. Work = 5.5 hrs.	Open = 70 min. Work = 5 hrs.
	70°F (21°C)	Open = 92 min. Work = 6 hrs.	Open = 82 min. Work = 6 hrs.	Open = 72 min. Work = 5.5 hrs.	Open = 70 min. Work = 5.5 hrs.	Open = 65 min. Work = 5.5 hrs.	Open = 62 min. Work = 5 hrs.
	80°F (27°C)	Open = 85 min. Work = 6 hrs.	Open = 75 min. Work = 5.5 hrs.	Open = 65 min. Work = 5.5 hrs.	Open = 62 min. Work = 5 hrs.	Open = 60 min. Work = 4.5 hrs.	Open = 58 min. Work = 4 hrs.

- Once the Forbo EZ-ON 100™ adhesive has reached its optimal installation time, install the flooring into the Forbo EZ-ON 100™ adhesive. Be sure to use reference marks to lay out flooring, as the Forbo EZ-ON 100™ adhesive has a very strong grab and the repositioning of flooring once laid into the adhesive may be difficult.
- Immediately roll the flooring in all directions using a 100 lb. roller to ensure that flooring has made complete contact with the adhesive. Additional rolling is required during installation to ensure that the material is flat and fully adhered.
- The use of a three-section wall roller or steel seam roller is required at walls, under toe kicks or anywhere the full weight of a 100 lb. roller cannot access or be applied.
- Remove any adhesive residue immediately with a clean white cloth with Forbo Adhesive Remover or mineral spirits. The area must then be rinsed with clean, cool water to remove all residue from the floor.
- Keep trowels clean when not being used to spread by scraping any excess adhesive off the trowel and then thoroughly clean the trowel with a clean rag and Forbo Adhesive Remover or mineral spirits. Ensure that all adhesive has been cleaned from the teeth of the trowel. It is recommended to clean before the adhesive has cured.
- Keep the lid on the pail when not in use.
- Once flooring has been installed and properly rolled, the flooring can immediately be cleaned and occupied.
- While the flooring can immediately be cleaned and occupied, the adhesive will continue to cure and build bond to the flooring installed. When possible, allow for additional time before wet maintenance to the floor to aid in moisture resistance of the flooring.

For additional information, Forbo's Installation and Floor Care Guidelines are available for download at www.forboflooringNA.com, or contact Forbo's Product Support & Education Services at +1-800-842-7839.