



Ground Control® Surfaces

GCS 4500 Flooring Adhesive Installation Guidelines (rev. 12.20)

The purpose of this manual is to provide general installations recommendations based on certain installation types and environments. Read entire installation instruction sheet prior to beginning installation. Improper installation or deficiencies related to site conditions may result in failure of the installation. Owner/installer assumes all responsibility for final inspection and acceptance of product prior to installation. Always refer to manufacturer's current installation recommendations which may be found at www.groundcontrolsurfaces.com.

Jobsite Conditions

The environment where installation will occur should be clean, fully enclosed and have a permanent heating, ventilation, and air conditioning (HVAC) system in continuous operation. Temperature must be maintained between 65 - 85°F, with relative humidity range between 35-55% for a minimum of 48 hours prior to installation. HVAC must remain operational during and post installation.

Usage

Follow Ground Control Surfaces Flooring Installation Guidelines and proper adhesive application rate for specific product type and use.

Acceptable Substrates

Always refer to flooring manufacturer's requirements for acceptable substrate type for the flooring to be installed. GCS 4500 may be used in applications over properly prepared concrete, wood, and some types of existing flooring.

New and existing concrete subfloors must meet the requirements of the American Concrete Institute (ACI) Publication 302.1 R-96 Guide for Concrete Floor Slab Construction, and the current version of ASTM F710, "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

New concrete slabs must be at least 45 days old and fully cured, free of moisture and must be pH neutral prior to installation.

Moisture levels in concrete should be tested according to the most current version of ASTM F2170 (standard test method for determining relative humidity in concrete floor slabs using in situ probes) with a moisture content not exceeding 5 pounds per 1000 sf, or ASTM F1869 (standard test method for measuring moisture vapor emission rate of concrete subfloor using anhydrous calcium chloride – CM method) with a maximum permissible moisture content of 2.0%. Alkalinity should not exceed a pH level of 9.

NOTE: Subfloor tests cannot predict long-term moisture and alkali conditions of concrete slabs. They are only indicators of conditions at the time the tests are conducted. Ground Control Surfaces does not warrant or guarantee unsatisfactory installations due to the presence of excessive alkali, moisture, or hydrostatic pressure in subfloors.

Wood subfloors should be smooth, clean, dry, structurally sound, free of vertical deflection, and free of dust, dirt, oil, or any other contaminant that would inhibit a proper adhesive bond. Use of a quality Portland cement-based patching compound to fill or smooth any irregularities in the subfloor is recommended.

Wood subfloors shall have at least 18" of well-ventilated space below. The ground under crawl spaces must be covered with 6-mil poly film to reduce moisture vapor transmission. Wood subfloors must be double construction or equivalent, with a minimum thickness of 1". Wood subfloors must be APA exterior underlayment grade plywood (or equivalent) with a fully sanded face that is free of voids.

NOTE: Wood subfloors such as particle board, OSB or construction grade plywood are not suitable subfloors.

Existing resilient floors must be of a single layer, non-cushioned and fully bonded to an approved substrate. Existing flooring must also be structurally sound, dry, clean, free of dirt, dust, wax, grease, paint, polish, oil, curing compounds, sealers and all other contaminants that would inhibit a proper adhesive bond between existing surface and new flooring.



Any existing resilient flooring that is embossed, textured, irregular or uneven, or has urethane coating, must be coated with high quality embossing leveler according to manufacturer’s instructions to minimize telegraphing. When doubt exists about suitability of existing flooring, it should be removed. The responsibility for determination of suitability of existing resilient flooring rests with the flooring contractor. Installations over existing resilient flooring may be more susceptible to indentations.

WARNING: Existing resilient floor coverings and black asphalt adhesive may contain asbestos, asbestos fiber or crystalline silica. Do not sand, scrape or abrade these materials. If removal of existing resilient floor covering is necessary, be certain that all precautions are taken, and proper procedures are followed. For information regarding proper removal procedures in the US, please refer to “Recommended Work Practices for the Removal of Resilient Floor Coverings” published by The Resilient Floor Covering Institute.

Contact Ground Control Surfaces for questions related to specific installation requirements for these or other substrate types.

Recommended Spread Rate and Trowel Sizes

Trowel dimensions and coverage will vary depending on porosity of substrate and the type of flooring installed. It is the responsibility of the contractor/installer to determine the proper porosity of the subfloor, apply the proper amount of adhesive for the jobsite conditions and ensure that all instructions, procedures and practices are strictly adhered to. Please see table below to determine correct trowel size/type and estimated spread rate for each installation.

Substrate/Flooring Type	Trowel Size/Type		Spread Rate
Porous Substrate: LVT/LVP, WPC, SPC, Rubber (tile & roll goods)	1/16" x 1/16" x 1/16" square-notch trowel		150-180 sf/gallon
Non-porous Substrate: LVT/LVP	1/16" x 1/32" x 1/32" U-notch trowel		220-260 sf/gallon

Application Instructions

Follow flooring manufacturer’s recommendations for suitable substrate, layout and specific product installation requirements. Spread adhesive using the required trowel listed above for specific substrate and product type.

Flooring may be placed immediately when installed over a porous substrate. If installing over a non-porous substrate allow the adhesive to dry until it no longer transfers to the finger when lightly touched. Do not install flooring into wet adhesive over a non-porous substrate.

Pressure Sensitive Application (porous and non-porous substrates)

Allow adhesive to dry for 30 - 60 minutes after application. Working time is approximately 12 hours under acceptable temperature and humidity conditions. Roll the flooring in both directions with a 75-100 pound 3-section roller immediately after the installation is complete.

Semi-wet Set Application (porous substrates only)

Allow adhesive to dry for 20 – 30 minutes after adhesive is spread to allow it to skin over or is dry to the touch^{SEP} with little or no transfer to the finger when touched. Working time is approximately 20 – 30 minutes under acceptable temperature and humidity conditions. Roll the flooring in both directions with a 75-100 pound 3-section roller immediately after the installation is complete.

Do not install flooring into wet adhesive on non-porous substrates.

Restrict foot traffic for 24 hours after installation. Do not allow heavy traffic, rolling loads, or furniture placement for 72 hours after installation. Additional time may be necessary for the adhesive to cure if the installation is over a non-porous substrate. Allow at least five days following the installation before conducting wet cleaning procedures or initial maintenance.

Clean Up

Use a clean wet cloth to clean up adhesive while still wet. Dried adhesive may require the use of an appropriate solvent.

Limitations

Do not allow product to freeze. White GCS4500 is freeze-thaw stable to 10 degrees F, it is necessary to protect from freezing. Store indoors at a temperature between 65-95°F.

Do not use on substrates that have been chemically cleaned or over treated plywood.

Shelf life is two years from date of manufacture.

Disclaimer

Users should determine the suitability of this product for their own particular purpose or application. Manufacturer is not responsible for the misuse of this product.

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