TECHNICAL BULLETIN

Understanding Installation Substrate Requirements

This document is intended to provide additional information or a deeper dive into the installation requirements regarding substrates. We are attempting to provide an understanding of how and why these items are important to and relate to issues resulting from improper substrate preparation.

The installation of resilient flooring is based upon the same requirements, no matter whether you are installing a rubber floor, solid vinyl floor, or LVT / LVP flooring. The requirements for the substrate are going to be the same. The most important aspect is that they substrate is solid, sound, and flat. I often say, it doesn't really matter regarding level, just flat. Resilient flooring, regardless of thickness will telegraph the substrate and even the trowel patterns of the adhesive below.

IMPORTANCE OF RECOMMENDED ADHESIVES

Each of our products has a recommended adhesive that is addressed in the Technical Data sheet as well as the Installation Instructions. The selection of that adhesive was done through a series of testing under various requirements. The goal is to select the best adhesive that works with the formulation of the products we manufacture. While adhesive manufacturers make and sell products that are designed to work with products on the market, the private labeled products that are recommended are specifically selected to work with the products we make. Subtle differences in product formulations can change the performance of the product.

You will see this statement from time to time, since there are many installation products available today for the commercial environment, we cannot evaluate each available product for fitness of use. We have thoroughly evaluated the above products with our resilient flooring and recommend their use. Our product warranties regarding bond are only with these products, the use of other products does not void product warranties but realize those bond warranties come from either the manufacturer or distributor. If you have a question about the fitness of use of other products, please contact customer service or technical services.

What this means is that with the recommended adhesive, the installation carries a full warranty for performance. This warranty includes Adhesive Bond, Product Wear, & Product Performance to the Technical Data information. If an adhesive other than recommend is utilized for installation, legally we cannot void product wear & product performance warranties, but we are not responsible for the bond warranty. That will come from the adhesive manufacturer.

Regarding the product performance portion of the warranty, if the same type of adhesive is selected and utilized according to the installation instructions, the product performance portion of the warranty remains in effect. This information can be confirmed through other means should it become necessary. As stated above, the product wear warranty is always in effect.

STORAGE OF MATERIAL

We understand there may be a need to store material for lengthy periods after purchase and prior to installation. As with all products it is important to make sure they are protected from the elements and stored indoors in their original packaging configuration. Our products are stored in warehouses for inventory and distribution prior to shipping. These are not climate-controlled warehouses but are protected from extreme conditions of excessive cold or heat. We would recommend similar conditions for storage after receipt of material.

Avoid storage of material in shipping containers, direct sunlight, outdoors, etc. It is extremely important after storage to properly acclimatize material into the service environment prior to installation, this acclimation process may take longer than the stated requirements for the products and there could be some residual effects of this storage that may make installation more difficult.

Deliver all materials to the installation location in its original packaging with labels intact. Do not stack pallets to avoid damage. Remove any plastic and strapping from packaging after delivery to the installation location. Inspect all material for proper type, color, and matching lot numbers if appropriate. Ensure that all adhesives intended for installation are approved for use with accessory materials if appropriate.

SERVICE ENVIRONMENT

Service environment is defined as the environment in which the materials will be utilized. Service temperature is defined as the normal setting of the HVAC in the environment in which the material is installed, i.e., typically 72° F in most commercial applications.

The reported technical data information for these products is based on a formulation that is designed, manufactured, and evaluated to perform at constant temperatures, not fluctuating more than 10° from normal selected service temperatures from the allowable 60° F (15° C) - 85° F (26° C) range. These products are designed for service on

Understanding Installation Substrate Requirements

substrate temperatures ranging from 60° F (15° C) - 85° F (26° C) unless otherwise noted in the specific installation section. These products are designed for service within ambient relative humidity between 40% and 60%.

If material will see conditions outside of these parameters, select appropriate adhesives for the intended service environment, such as wet-set acrylics or urethanes for areas that will have temperature variations or excessive windows and/or sunlight exposure from walls or ceilings such as sunrooms, window walls, skylights, etc.

Pressure sensitive adhesives are soft setting adhesives and do not prevent effects or issues that temperature changes and direct sunlight creates in products due to thermodynamics, these will be greater in vinyl-based products versus rubber-based products but do exist and therefore need to be taken into consideration.

If there are concerns regarding this information or the service temperature, substrate temperature or installation environment will not meet these requirements, please contact Technical Services for recommendations prior to installation at solutions@rhctechnical.com, we will be happy to discuss and provide direction or confirmation of the project at that time.

JOB SITE CONDITIONS

Before starting the job and performing any preparations, testing and/or installation we recommend the following conditions be met to ensure a successful installation.

Facility must be fully enclosed, sealed and weather tight. Building HVAC must be up and running in permanent operation prior to installation (if temporary systems or systems other than the permanent HVAC systems are utilized it must be capable of maintaining the same conditions as the permanent HVAC and/or service conditions). Allow all trades to complete work prior to installation whenever possible, if not possible be aware of issues that can be created by other trades during the installation process. These include but are not limited to adhesive displacement from ladders, rolling carts and job boxes, etc.

Installation areas must have adequate lighting to allow for proper inspection of the flooring and substrates prior to installation.

Installation areas must be properly moisture evaluated to ensure the substrate is properly dry to receive flooring products. Review additional information below and of course, if conditions are not in agreement with the requirements notify the General Contractor and Technical Services if needed.

By covering a substrate, underlayment, or existing surface, you have indicated acceptance of substrate and installation environment.

ACCLIMATION

Installation area and all materials must be maintained at ***desired service temperatures*** for a period of 48 hours prior to installation, during the installation and for the service life of the installation afterwards. If the material must be installed outside of the above acclimation and service temperature ranges, contact Technical Services for more detailed installation recommendations.

Acclimation is important not only to the installation of the product but also to the long-term performance of the product. Proper acclimation and proper adhesive selection set up the installation for the best possible scenario.

SUBSTRATE PREPARATION INFORMATION

All substrates must be prepared according to the following information (ASTM F710 & ASTM F1482 have been used as a baseline, keep in mind our requirements are more detailed than these documents), as well as applicable ACI and RFCI guidelines.

Substrates must be clean, smooth, permanently dry, flat, and structurally sound. Substrates must be free of visible water or moisture, dust, sealers, paint, sweeping compounds, post placement curing compounds, residual adhesives and chemical adhesive removers, concrete hardeners or densifiers, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material, or foreign matter. If not, consideration should be taken regarding the effects of these conditions and how they can affect the installation.

It is recommended that all substrates have a floor flatness of FF32 and/or a flatness tolerance of 1/8” in 6’ or 3/16” in 10’. Substrates that do not meet this requirement shall have a cementitious patch or self-leveling underlayment installed to flatten the installation area.

All substrates must have all existing adhesives, materials, contaminants, or bond-breakers mechanically removed via scraping, sanding, grinding, or buffing with a 25 grit DiamaBrush Prep Plus tool prior to adhesive installation. In extreme situations, shot

Understanding Installation Substrate Requirements

blasting may be required. Mechanical preparation must expose at least 90% of the original substrate. Following cleaning and removal, all substrates must be vacuumed with a HEPA approved vacuum and flat vacuum attachment to remove all surface dust. Sweeping without vacuuming will not be acceptable.

Do not use solvent/citrus based or other chemical adhesive removers or oil-based sweeping compounds prior to installation.

NOTE: Regarding substrate preparation when mechanical sanding, grinding, shot blasting, and vacuuming always follow the Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesives," and all applicable local, state, federal and OSHA requirements regarding Asbestos and Silica containment regulations.

CONCRETE SUBSTRATES

All concrete substrates, whether on-grade and/or below grade must have an intact and effective moisture vapor barrier which meets the current requirements of ASTM E1745.

On-grade and/or below grade slabs not containing an intact and effective moisture vapor barrier meeting the current requirements of ASTM E1745 should have a 100% solids moisture control system applied prior to application of patches, underlayments, adhesive and the installation of flooring products for the product warranty to remain in effect.

All concrete substrates must have a minimum compressive strength of 3500 PSI and be prepared in accordance with the information below. When flooring is being installed directly over concrete, concrete surfaces that have an ICRI Concrete Surface Profile (CSP) over 4 shall be smoothed with a self-leveling underlayment or a patch to prevent imperfections from telegraphing through flooring materials.

CHEMICALLY ABATED CONCRETE SUBSTRATES

In situations where existing flooring adhesive was removed chemically, since there are known concerns with this process, one of the following conditions now exist.

(1) Once the chemical is present in the substrate it cannot recognize the difference between the old adhesive and the new adhesive, (2) it is considered a penetrant and there is no way to know how deep into the substrate it could have penetrated into the substrate due to porosity, (3) there is no way to tell (in a short term test) if the substrate has been neutralized or rinsed (abatement chemical removed) well enough to accept new adhesive.

However, if a chemical abatement has already been performed, we recommend the Mapei process to prepare the substrate to receive a finish flooring product. The Mapei process is to scour the substrate using the Planiprep SA according to Mapei instructions, then top with the Planiprep ET according to Mapei instructions. Once the process is completed, the substrate would need to be treated as non-porous for the selection of installation adhesives and methods.

CONCRETE SUBSTRATES CONTAINING MOISTURE CONTROL ADMIXTURES

In situations where admixtures or additives are added to the concrete mix for the sole purpose of controlling moisture, we do accept those substrates and consider them acceptable if the following is verified and completed prior to installation.

We want to clearly indicate the responsibilities at the time of application and moving forward for warranty purposes. If the product works as it is intended, it should change the porosity (absorption rate) of the concrete which would alter the application process of the adhesive based on the adhesive chosen for the project, for example a wet set for porous applications would now be unacceptable for the project.

We require porosity testing at the time of application to ensure the application method of the adhesive is performed correctly. We also require bond tests in several areas to ensure the slab is suitable for bonding. If these things are done (as indicated in our installation information) there should be no other compatibility issues with the moisture control admixtures in the concrete substrate.

Typically, any performance warranties related to the admixtures, including material releasing from the substrate due to issues with the admixture is covered under the admixture manufacturer's warranty and added insurance policies related to the project.

MOISTURE TESTING ON CONCRETE SUBSTRATES

Moisture testing is an essential part of determining the suitability of a concrete slab to receive a resilient floor covering. Moisture testing must be performed on all concrete slabs, regardless of their age or grade level, including areas where resilient flooring has already been installed.

Understanding Installation Substrate Requirements

Moisture testing shall be conducted with the area or building at service conditions, (i.e., fully enclosed, weather-tight, and with the permanent HVAC in operation). In general, moisture testing shall be conducted on concrete surfaces that exhibit the final prepared stage before the installation of the flooring material and before installation of smoothing or leveling compounds. Test results are only indicators of current moisture conditions at the time of testing and do not predict future moisture conditions.

NOTE: Moisture failures are a complex, cumulative, and synergistic series of events. The moisture testing information below is provided as an industry service and to help reduce the likelihood of moisture related failures within the floor covering industry.

Moisture testing determines a snapshot at the time of testing only and does not guarantee or preclude the possibility of issues in the future. To effectively determine moisture at the time of installation the on-grade or below grade substrates must have an effective moisture vapor barrier that meets the current requirements of ASTM E1745. If these conditions do not exist, we recommend a moisture mitigation system prior to installation of resilient flooring.

We require ASTM F2170 RH moisture testing on all concrete substrates. In addition to ASTM F2170, we strongly recommend ASTM F1869 MVER testing be performed, especially on concrete substrates that have previously had flooring installed. ASTM F1869 MVER testing is beneficial to the installation performed on the substrate in the prepared condition if not going to prepare the substrate to the extent required in the testing procedure.

ASTM F2170 Relative Humidity testing indicates the amount of moisture in the concrete that has the potential to come out of the substrate during equilibration. ASTM F1869 Calcium Chloride testing indicates how much and how quickly the relative humidity in the concrete is evaporating from the top 1/2” to 3/4” of the concrete.

For moisture readings exceeding the RH and/or MVER limitations, a dehumidification system can be utilized until moisture readings when reevaluated are within acceptable levels. For excessive readings, the application of a high-quality moisture mitigation system may also be employed.

We do not warrant any product or procedure for remediation of high moisture content. There are several companies that manufacture products suitable for moisture remediation. We suggest you refer to ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring and ASTM F3010 “Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings”.

NOTE: Although these moisture testing information and recommendations are widely accepted within the resilient floor covering industry, there is currently no known exact amount of moisture vapor emission rate or exact % of RH to know exactly when a floor covering, adhesive, or coating system will fail.

ASTM test methods may be obtained from www.astm.org and we encourage your company to become and active and engaged member in development of these standards.

ASTM F2170 – RELATIVE HUMIDITY TESTING (*in-situ* PROBES) OF CONCRETE SUBTRATES

This test method covers the quantitative determination of percent relative humidity in concrete slabs for field or laboratory test. This method is measured in percentage (%) content. Refer to recommended adhesives chart at the beginning of this document for the acceptable RH levels for installation.

Conduct one test for every 1,000 square feet (minimum 3 tests) to ensure concrete does not exceed the recommended RH for the flooring product and the adhesive being used.

We require the use of Wagner Meters Rapid RH Probes for ASTM F2170 testing.

ASTM F1869 – MOISTURE VAPOR EMISSION RATE TESTING (CALCIUM CHLORIDE) OF CONCRETE SUBTRATES

This test method covers the quantitative determination of the rate of moisture vapor emitted from below-grade, on-grade, and above-grade (suspended) bare concrete floors. This method is measured in lbs. / 24 hours / 1000 square feet. Refer to recommended adhesives chart at the beginning of this document for the acceptable RH levels for installation.

To conduct the F1869, the surface of the concrete must be porous. Hard machine troweled concrete or concrete surfaces with extraneous substances on the surface such as residual adhesive, sealers, curing compounds, etc. must be mechanically removed prior to testing.

ADDITIONAL MOISTURE TESTING METHODS OF CONCRETE SUBTRATES

ASTM F3311 Mat Bond Evaluation and ASTM F2659 Electric Moisture Meters can be used to detect the presence of moisture, but do not satisfy the test requirement of ASTM F2170 and/or ASTM F1869. These methods provide qualitative results that may indicate targets or hot spots for further testing. Only the ASTM F2170 and/or ASTM F1869 can provide quantitative results for acceptance.

Understanding Installation Substrate Requirements

We strongly recommend the use of Wagner Meters Concrete Moisture Meters for ASTM F2659 testing.

To conduct the Mat Bond Evaluation, double face tape 3' x 3' pieces of polyethylene to the subfloor (approximately 50' apart) for a minimum of 72 hours. After 72 hours, remove the polyethylene and if there is any evidence of moisture, allow additional time for the subfloor to dry before testing further.

ASTM F3191 – SUBSTRATE WATER ABSORPTION (POROSITY) OF CONCRETE SUBSTRATES

All concrete substrates must be evaluated per ASTM F3191 to confirm porosity, this is utilized to determine the method of adhesive application or how the adhesive will act upon the concrete.

Use a pipette or equivalent to conduct three tests by placing a .05 mL (1/4" wide) droplet of clean, potable water onto the surface. If the substrate absorbs water within 60 seconds, the substrate is considered porous. Conduct 3 tests for the first 2000 sq. ft. and one for each additional 3000 sq. ft., at least one per room. All other substrates that do not meet this requirement are considered non-porous. Ensure that all non-porous substrates are not contaminated.

DEW POINT (SURFACE TEMPERATURE AT WHICH CONDENSATION OCCURS) OF CONCRETE SUBTRATES

Dew point is the temperature at which the humidity in the air begins to condensate on a surface. As it relates to indoor moisture condensation, the Dew Point is a crucial factor for ensuring adequate and proper conditions exist during substrate testing, substrate preparation, and installation of flooring products.

Within the installation parameters regarding air temperature of 60° F - 85° F and relative humidity of 40% - 60%, the substrate temperature shall be at least 5° F above the Dew Point. Adhesives shall not be spread, and flooring shall not be installed any time the concrete surface temperature is within 5° F of dew point. See the chart below to determine Dew Point Temperature to compare to current slab temperature.

Dew Point Reference Chart

		Ambient Air Temperature In Degrees Fahrenheit						
		60° F	**65° F**	**70° F**	**75° F**	**80° F**	**85° F**	**90° F**
Relative Humidity Percentage	**70%**	50° F	55° F	60° F	64° F	68° F	74° F	78° F
	65%	47° F	53° F	57° F	62° F	66° F	72° F	76° F
	60%	45° F	50° F	55° F	60° F	64° F	69° F	73° F
	55%	43° F	48° F	53° F	58° F	61° F	67° F	70° F
	50%	40° F	45° F	50° F	55° F	59° F	64° F	67° F
	45%	37° F	42° F	47° F	52° F	56° F	61° F	64° F
	40%	35° F	40° F	43° F	49° F	52° F	58° F	61° F
	35%	31° F	36° F	40° F	45° F	48° F	54° F	57° F
	30%	28° F	32° F	36° F	41° F	44° F	50° F	52° F

To determine the dew point; read the room air temperature, read the room relative humidity and the concrete surface temperature. Locate the intersection of the air temperature and relative humidity readings and determine the dew point. If the concrete surface temperature is within 5° of each other, installation shall not occur.

DETERMINING PH LEVEL OF CONCRETE SUBSTRATES

Concrete substrates typically have a higher concentration of soluble alkali salts on the surface due to the initial bleeding process of a freshly placed slab. If there is sufficient moisture within the slab at the time of resilient installation, there could be a potentially damaging high pH solution that develops beneath the flooring material.

To determine the pH level present, we recommend following ASTM F3441 Standard Guide for Measurement of pH Below Resilient Flooring Installations. Currently, this is not a requirement of ours but a strong recommendation to record the results at time of installation in the event of a future failure to help determine root causes of the failure. Either the Flat Surface Electrode pH Meter method or the pH Test Paper method would be an acceptable test method if performed according to the ASTM standard.

WOOD SUBSTRATES

Wood substrates must be prepared in accordance with ASTM F1482. Prior to installation, moisture retardant sheeting with a maximum rating of 1.0 perm must be in place beneath the wood subfloor. It shall be overlapped at a minimum of 8" and the crawl space shall be well-ventilated.

Understanding Installation Substrate Requirements

Wood substrates shall be, at a minimum double layer construction with a total thickness of 1”. It shall be rigid and free of any movement. It shall be structurally sound and designed as a resilient flooring underlayment, smooth enough to prevent telegraphing through the flooring product. At a minimum, the top layer directly under the flooring and adhesive should come from section 3.2.3.1 Approved Wood Substrates and have a minimum thickness of 1/4”.

It shall be free of any substance that may stain such as marking inks, paints, solvents, adhesives, asphalt, dye, etc. and be of uniform density, porosity, and thickness. It shall be installed in strict accordance with the manufacturers’ recommendations.

Wood substrates must not exceed 8% moisture content.

We require the use of Wagner Meters Wood Moisture Meters for testing.

APPROVED WOOD SUBSTRATES

APA Certified Plywood, Poplar Underlayment, Birch Plywood Underlayment

NON-APPROVED WOOD SUBSTRATES

Lauan, OSB, Particle Board, Masonite, Chipboard, Construction Grade Plywood, Flake board, Fire or Pressure Treated Plywood, Existing Hard Wood, or Strip Wood Flooring

Advantech Underlayments (requires a minimum of 1/4” of Approved Wood Substrates on top by Advantech Manufacturer)

GYPSUM BASED SUBSTRATES

Gypsum-based substrates are recommended to have a minimum compressive strength of 3500 PSI. The substrate must be structurally sound and firmly bonded to the subfloor below. Compressive strengths below 3500 PSI can reduce performance properties of products installed. Sometimes steps can be taken to improve the PSI of at least the surface of the gypsum-based surface. In light commercial, multi-family, and/or residential applications this may be lower or closer to 2500 PSI due to the specification of the product and therefore just be aware of the possibility of reduced performance due to the performance of the gypsum substrate. This does not affect the warranty of the product unless the properties of the gypsum-based substrate lead to or cause failure.

Any cracked or fractured areas must be removed and repaired with a compatible patch or repair product for gypsum-based substrates. Follow those products installation instructions for installation over a gypsum substrate.

Most if not all gypsum substrates require the application of a sealer on the surface to prevent dusting and promote adhesion to the substrate. New or existing gypsum substrates may require additional primer just prior to finished floor being installed. These products are available from many suppliers as standard latex primers and do not interfere with the installation of our products. Follow all manufacturers’ recommendations regarding preparation for resilient flooring installation.

UNDERLAYMENT PANELS

Cementitious and Gypsum based underlayment panels are acceptable substrates if the installation of those panels follows the guidelines set forth by the panel manufacturers. If there is no designation of porosity or how to treat the panel when it comes to adhesive application, we would recommend a porosity test to determine how to apply the adhesive.

ResinDek and other substrate options for Mezzanines, since these products are installed with gapping between them the recommendation from ResinDek is to apply a minimum of 1/4" underlayment screwed to the decking to install resilient flooring

RESINOUS SUBSTRATES

When installing directly over a resinous product, such as a urethane moisture barrier or an epoxy coating, ensure that coating is dry to the touch and has cured for the prescribed length of time. Substrate must be clean, dry, sound, and free of contamination. Resinous substrates are considered ***non-porous*** so ensure selected adhesives can be used over non-porous substrates and follow all installation instructions and flash times for non-porous substrates.

METAL SUBSTRATES

Metal substrates must be thoroughly sanded/ground and cleaned of any residue, oil, rust and/or oxidation. The substrate must be smooth, flat, and sound prior to installation. When installing in areas that may be subject to topical water or moisture and/or high humidity, an anti-corrosive coating must be applied to protect metal substrate. Contact a local paint or coating supplier for coating recommendations. Install flooring within 12 hours after sanding/grinding to prevent re-oxidation.

Understanding Installation Substrate Requirements

Any deflection in the metal floor can cause a bond failure between the adhesive and the metal substrate. Be sure to follow installation procedures and trowel sizes for non-porous substrates. Installing over Checker plate or Diamond plate is not recommended.

CRACKS, JOINTS, & VOIDS

All cracks, joints, and voids, as well as the areas surrounding them, must be clean and free of dust, dirt, debris, and contaminants. All minor cracks and voids may be repaired with a suitable cementitious patch. Due to the ***dynamic nature*** of concrete slabs, ***we cannot warranty installations to cover expansion joints, cracks, or other voids such as control cuts, saw joints, moving cracks, and/or voids.***

Do not install flooring directly over any expansion joints as all expansion joints shall be honored and have a suitable expansion joint covering system installed to allow expansion joint to move as it was designed. In areas where random cracks are 1/16” or greater it is hard to tell if the slab will continue to move or has finished moving.

Consult a structural engineer if there are any questions or concerns with a crack or joint, especially those that may affect structural integrity such as expansion joints or excessive random cracking in areas that are not designed to move.

RADIANT HEATING SUBSTRATES

When installing flooring products approved for radiant heated substrates (individual installation sections and product data sheets will indicate if product is not to be installed over radiant heated substrates) over a substrate that contains a radiant heating system, ensure the radiant heat is turned off 48 hours prior to installation and remains off during the entire installation.

The radiant heat may be turned on 48 hours after installation and the normal operating temperature shall be increased gradually over the course of 24 hours. Ensure the temperature of the radiant heating system does not exceed 85° F (29.5° C) and avoid making abrupt changes in radiant heating temperature.

EXISTING FLOORING SUBSTRATES

RUBBER, SOLID VINYL, & QUARTZ FLOORING

Existing carpet, rubber, LVT, LVP, linoleum, cushioned vinyl, cork, asphaltic materials, and/or floating floors as well as the adhesives used to install them, must be completely removed from the substrate prior to installation.

Existing single layers of VCT, VAT, quartz tile, solid vinyl tile, non-cushioned sheet goods, and/or asphaltic materials and existing adhesives or adhesive residue must have a compatible cementitious patch or cementitious self-leveling underlayment installed over the substrate (existing flooring) prior to installation.

Existing hardwood flooring requires suitable underlayment grade plywood to be installed over the substrate.

New flooring may be installed over existing stone flooring substrates, such as terrazzo, porcelain, or ceramic tile. Ensure existing flooring is a single layer of material and that all materials are clean, dry, sound, solid, well adhered, and free of site-applied finishes, waxes and/or contaminants. All loose tiles must be removed and repaired or replaced. All grout lines and irregularities must be filled and troweled flush with a suitable primer and cementitious patch to prevent telegraphing of the existing floor. All existing flooring substrates that are outside of flatness tolerances that cannot be repaired with a suitable patching compound shall be leveled with a suitable cementitious self-leveling underlayment to achieve a smooth, flat substrate.

All existing flooring substrates must have all site-applied finishes and/or waxes completely removed prior to flooring installation to ensure a proper adhesive bond. For mechanical removal, use a low-speed buffer and 40-60 grit sandpaper. Properly prepared substrates shall not have any remaining gloss or sheen. For chemical removal, ensure chemical treatments will not disrupt adhesion of the existing flooring to the substrate. Be sure to rinse the existing flooring adequately with clean, potable water to remove all chemicals from the surface of the material.

Do not install flooring until any moisture on, between or below existing flooring has completely dried. Ensure all dust, dirt, and debris are removed prior to flooring installation.

ESD FLOORING REQUIREMENTS

We highly recommend that ESD Flooring products be installed directly to the permanent substrate such as concrete or Wood Subfloor to ensure maximum performance of the ESD properties. However, there are situations where decisions are made to install over existing flooring. If that is the case, please follow the guidelines below for the best chance of success.

Understanding Installation Substrate Requirements

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LVT FLOORING REQUIREMENTS

Some products in the Luxury Vinyl Flooring category are floating and may be utilized in applications that do not coincide with these guidelines and that will be spelled out in the individual installation section for those products if there are exclusions.

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Existing VCT, VAT, quartz tile, solid vinyl tile, non-cushioned sheet goods, and/or asphaltic materials and existing adhesives or adhesive residue must have a compatible cementitious patch or cementitious self-leveling underlayment installed over the substrate (existing flooring) prior to installation.

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Do not install flooring until any moisture on, between or below existing flooring has completely dried. Ensure all dust, dirt and debris are removed prior to flooring installation.

EXISTING ACCESS PANEL REQUIREMENTS

Cementitious filled and Metal access panels are acceptable substrates for the installation of resilient flooring. All existing flooring material must be removed, and the panel prepared to the original surface with all adhesives removed.

It must be determined if the panels are to remain accessible to the area underneath and how that access will be maintained. Some panels have fasteners that must remain accessible to remove the panel. Some panels may require the removal of larger format tiles to gain access, in these applications we would recommend a releasable adhesive for the installation of our products, which we do not provide a true releasable adhesive within our Excelsior product line.

We offer products to many of the access panel manufacturers for lamination in their process, if project permits this would be the recommended process to follow.

Understanding Installation Substrate Requirements

EXISTING ACCESS PANEL REQUIREMENTS FOR ESD FLOORING

Cementitious filled and Metal access panels are acceptable substrates for the installation of resilient flooring. All existing flooring material must be removed, and the panel prepared to the original surface with all adhesives removed.

It must be determined if the panels are to remain accessible to the area underneath and how that access will be maintained. Some panels have fasteners that must remain accessible to remove the panel. Some panels may require the removal of larger format tiles to gain access, in these applications we would recommend a releasable adhesive for the installation of our products, which we do not provide a true releasable adhesive within our Excelsior product line.

When installing ESD flooring over existing access panels, it must first be determined if the access panel frames are grounded, and the placement of the panels are grounded as well. Then it would require an ESD adhesive to complete the system.

We offer products to many of the access panel manufacturers for lamination in their process, if project permits this would be the recommended process to follow.

LOOSE LAY MOISTURE OR SOUND CONTROL UNDERLAYMENTS FOR RUBBER & SOLID VINYL

It is not recommended to install over Loose Lay moisture or sound control products, please contact Technical Services with the product information you are installing over for further directions.

LOOSE LAY MOISTURE OR SOUND CONTROL UNDERLAYMENTS FOR LVT

It is not recommended to install over Loose Lay moisture or sound control products, please contact Technical Services with the product information you are installing over for further directions.

ADHESIVE BOND TEST

An adhesive bond test must be performed using actual flooring and adhesive materials being installed to determine adequacy. Test areas should be a minimum of 36” x 36” and remain in place for at least 72 hours prior to evaluation for bond strength to the substrate. This will help to ensure application of the adhesive and the bond achieved is adequate for the project to continue.

APPLICATION OF ADHESIVE

The application of the adhesive is a critical part of the successful installation of the product. Information is available regarding typical application information regarding the different adhesives and how they should work when applied within the stated jobsite conditions. We consider porosity as the only difference and not substrate type such as cementitious or wood. Of course, any variation in temperatures will cause the adhesive actions to vary and if specific to the application of a particular product we have tried to list those for you. As we are not able to list all the conditions and if you have a specific question that is not covered, please contact us.

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