JOBSITE EXAMINATION

Before work commences, examine the areas to be covered and report any deficiency or adverse condition in writing to the general contractor, owner, developer or architect. Do not proceed with the work until surfaces and conditions comply with the requirements indicated in the manufacturer’s instructions, applicable industry standard, federal, state, provincial, local regulations and good work practices. By beginning work, the applicator/user acknowledges that the conditions are acceptable for installation.

SURFACE PREPARATION

1. General

1.1 All substrates must be structurally sound, dry, solid and stable. The substrate should be clean and free of dust, dirt, oil, grease, paint, curing compounds, concrete sealers, loosely bonded toppings, old adhesive residues (unless otherwise recommended by MAPEI) and any other substance that may prevent or reduce adhesion. If the substrate contains these substances, they must be mechanically removed.

1.1.1 Warning: Do not install over vinyl asbestos tile (VAT) or any flooring, substrate or substance that may contain asbestos. Do not install over any adhesives, including asphalt cutback residue, that may have been used to install flooring containing asbestos. Do not sand or remove any existing resilient floors or cutback adhesive that contains asbestos fibers or crystalline silica. For removal instructions, refer to the Resilient Floor Covering Institute’s Recommended Work Practices. Follow all local, state and federal regulations and industry standards when mechanical removal is required.

1.1.2 Warning: Certain paints may contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state, provincial and local laws and Lead-Based Paint Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing (September 1990) or subsequent editions published by the U.S. Department of Housing and Urban Development regarding (1) appropriate methods for identifying lead-based paint and removing such paint; and (2) any licensing, certification and training requirements for persons performing lead abatement work.

1.2 All substrates must be plumb and flat to a tolerance in plane of 1/8" (3 mm) in 10' (3.05 m) for floors and 1/8" (3 mm) in 8' (2.44 m) for walls. Refer to the flooring and/or wall-base manufacturer’s guidelines.

1.3 Imperfections and irregularities (holes, voids, bumps, cracks, depressions, etc.) must be corrected, and surfaces must be smooth and even before the application of MAPEI adhesives. See Section 10, “MAPEI Surface Preparation Products,” for options and consult MAPEI’s Technical Services Department for product recommendations.

1.4 Turn off all forced ventilation and floor-heating systems before installation, and protect work against drafts during installation and for at least 48 hours after completion to prevent damage to substrates, installation products and flooring materials.

1.4.1 When necessary, build a temporary shelter and use indirect auxiliary heaters to maintain an adequate temperature level in the working environment. Exhaust temporary heaters to the building’s exterior to prevent health hazards and damage to workers from toxic fumes and emanations.

1.5 Always refer to the flooring and/or wall-base manufacturer’s guidelines regarding site conditions, surface preparation requirements, acceptable underlayments and proper conditioning of flooring material. In addition, refer to the correlating industry standard(s) such as CRI #104 – Standard for Installation of Commercial Carpet, CRI #105 – Standard for Installation of Residential Carpet, RFCI (Resilient Floor Covering Institute) – Recommended Installation Practice for Vinyl Composition Tile (VCT), RFCI (Resilient Floor Covering Institute) – Recommended Installation Practice for Homogeneous Sheet-Flooring Fully Adhered, NOFMA (Wood Flooring Manufacturers Association) – Installing Hardwood Flooring.

1.6 All recommendations and guarantees regarding any material used as a substrate for flooring are the sole responsibility of the manufacturer of said underlayment material. Suitability of any substrate to receive adhesive and flooring products should always be tested in an inconspicuous location before complete installation.

2. Concrete

2.1 The specific composition of the concrete should be in accordance with the guidelines and practices of American Concrete Institute (ACI) standards. The concrete should have a density of at least 100 lbs. per cu. ft. (1 600 kg per m³).

2.2 All concrete substrates must be fully cured and free of any hydrostatic and/moisture problems. The moisture-vapor emission from a concrete slab must not exceed 3 lbs. per 1,000 sq. ft. (1.36 kg per 92.9 m²) per 24 hours as measured by the anhydrous calcium chloride test kit, based upon test method ASTM F1869. It also must not exceed the flooring or adhesive manufacturer’s written limitations for suitable emission rates. Refer to Technical Data Sheets at www.mapei.com for specific limits on MAPEI adhesives, membranes and surface-preparation products.
3. Plywood

3.1 All plywood underlayments must be recommended and guaranteed by either the wood underlayment manufacturer or the floor-covering manufacturer. Such underlayments include APA-rated Group 1 exterior-grade plywood, CC-plugged or better conforming to U.S. Product Standard PS 1-95 or COFI-classified SELECT or (SEL-TF) exterior-grade plywood conforming to CSA-O121 Standard for Douglas fir.

3.2 Stripwood subfloors, presswood, chipboard, flakeboard and similar types of dimensionally unstable materials are not acceptable substrates for the installation of MAPEI's surface preparation products and adhesives. Underlayment-grade particleboard and oriented strand board (OSB) may be used under specific conditions when specified by MAPEI and when approved by the floor-covering manufacturer. Follow the floor-covering manufacturer's recommendations regarding acceptable wood underlayments.

3.3 Plywood surfaces must be installed with the smooth side facing up.

3.4 Plywood subfloors should be double-layered. The base layer should be plywood at least 5/8" (16 mm) thick over joist 16" (41 cm) on center. Follow the plywood manufacturer's recommendations regarding proper application. A second layer, a wood underlayment at least 1/4" (6 mm) thick, is required for all resilient sheet vinyl flooring (thicker boards may be required for commercial applications).

3.5 The adjacent edges of the plywood sheets should not be more than 1/32" (1 mm) out of plane.

3.6 Do not install over a subfloor that is in direct contact with the ground. The plywood must have at least 18" (46 cm) of cross-ventilated air space between the underside of the subfloor and the ground. Cover the ground surface of crawl spaces with a suitable vapor barrier.

3.7 Under no circumstances should any floor material be laid over wood underlayment or subfloors that are under conditions that might cause buckling or rotting of wood. Always replace wood subfloors or underlayments that have been subject to water damage.

3.8 In any floor-covering installation, the plywood should be dry and the moisture content should not exceed the moisture content recommended by the wood and/or flooring manufacturer, generally 6% to 12% when measured with a quality wood moisture meter.

4. Gypsum Wallboard (Wall-based installation)

4.1 Gypsum wallboard must be undamaged with paper intact.

4.2 Nonporous paints, wallpaper, vinyl wall coverings, laminates and similar nonporous surfaces must be removed. Carefully sand latex paint surfaces in order to remove as much of the paint as possible, without causing damage.

4.2.1 Warning: Certain paints may contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state, provincial and local laws and Lead-Based Paint Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing (September 1990) or subsequent editions published by the U.S. Department of Housing and Urban Development regarding (1) appropriate methods for identifying lead-based paint and removing such paint; and (2) any licensing, certification and training requirements for persons performing lead abatement work.

4.3 Replace gypsum wallboards if they are damaged, if the gypsum core is exposed or if the paint is not latex-based.

5. Gypsum Substrates

5.1 All gypsum substrates must be dry, clean, flat and properly primed with the manufacturer's recommended primer or MAPEI's Primer L™ (diluted 1 part Primer L to 3 parts water).

5.1.1 Note: Unprimed gypsum substrates may leave a dusty residue on the surface and have a slightly higher porosity factor that could affect the adhesive's open time and weaken the adhesive bond. A complete floor-installation failure may occur if the substrate is not properly primed before the floor installation.

5.2 If there is no proof that the manufacturer's recommended primer has been applied or if the gypsum substrate has been resurfaced, apply a dilution of 1 part Primer L to 3 parts water over the entire surface.

5.3 Diluted Primer L may be applied using either a 1/4" (6-mm) short-nap roller or sprayed using a common garden sprayer. Ensure that the entire surface of the subfloor is covered with primer.

5.3.1 Do not allow the primer to puddle or create a film (“skin”) on the surface.

5.4 Depending on the porosity of the substrate, a second coat of diluted Primer L may be necessary. Before applying a second coat, allow the primer to dry until it is tacky to the touch.

5.5 Allow the primer to dry completely before installation of floor-covering adhesives.

5.6 If patching is required, first apply Primer L as instructed above followed by Planipatch® mixed with diluted Planipatch Plus™ (1 part Planipatch Plus to 3 parts water), or Primer L as instructed above followed by Planitex® UNS. (Refer to Technical Data Sheets for details.)
6. Steel
6.1 Steel may be used under specific conditions: when recommended by MAPEI as a substrate for use with specific MAPEI adhesives, and when approved by the floor-covering manufacturer.
6.2 Steel substrates must be rigid, solidly fixed in place, and free of paint, primer, oil or corrosion.
6.3 Consult MAPEI's Technical Services Department for adhesive recommendations over steel. Refer to Technical Data Sheets for details.

7. Heated Floors
7.1 Electric and hydronic radiant-heat systems must be installed according to the guidelines of the radiant-heat system manufacturer. Consult MAPEI's Technical Services Department for product recommendations.
7.2 To avoid damage to the installation products and floor covering, the operating temperature of the heated floor must not exceed 85°F (29°C).
7.3 Consult the floor-covering manufacturer for approval before installation over heated floors.
7.4 Consult MAPEI's Technical Services Department for adhesive recommendations over heated floors.

8. Existing Resilient Floor Coverings
8.1 Existing noncushioned sheet vinyl, vinyl asbestos tile (VCT), vinyl composition tile (VCT), ceramic tile and cement terrazzo must be firmly bonded, clean, and free of dust, dirt, oil, grease, paint, wax, sealer, soap and any other substance that may prevent or reduce adhesion.
8.1.1 Warning: Do not sand or remove any existing resilient floors or cutback adhesive that contains asbestos fibers or crystalline silica. For removal instructions, refer to the Resilient Floor Covering Institute's Recommended Work Practices. Follow all local, state and federal regulations and industry standards when mechanical removal is required.
8.2 In cases where the existing floor covering has any type of texture (such as raised patterned residential sheet vinyl and tile/grout lines in ceramic), all indentations must be completely leveled. It is required that the grout lines receive a thorough brush cleaning.
8.3. Noncushioned sheet vinyl with a vinyl or urethane wear layer must be fully adhered (not perimeter-glued) and limited to one layer only. New vinyl and vinyl with a urethane wear layer must be slightly roughened to dull the finish (60-grit sandpaper is recommended). The wear layer must remain intact, and the underlying sheet-vinyl paper should not become exposed. The area must then be vacuumed, mopped and allowed to dry completely.
8.4 Warning: Do not install over vinyl asbestos tile (VAT) or any flooring, substrate or substance that may contain asbestos. Vinyl composition tile (VCT) must be limited to one layer only. A commercial-grade wax stripper must be used to remove any dirt, oil, grease, wax or sealer. The area must be neutralized, rinsed well with clean water and allowed to dry completely.
8.5 Ceramic tile and cement terrazzo must be roughened by sanding or shotblasting. The area must then be vacuumed, mopped and allowed to dry completely. Over cement terrazzo, remove terrazzo strips, fill with Planibond EBA, and broadcast sand over the fill area to ensure good compatibility with the subsequent patch. Apply a coat of Planipatch mixed with diluted Planipatch Plus. Failure to do so may result in the terrazzo strips showing through the finished flooring. Such a condition will not be acknowledged as MAPEI's responsibility.
8.6 Existing floor coverings not acceptable for the installation of MAPEI surface preparation products and adhesives include the following: self-stick tile, glass tile, linoleum, laminate, fiberglass, poured epoxy floors and other dimensionally unstable and/or nonporous materials.
8.7 Consult the floor-covering manufacturer for approval before installation over existing flooring.
8.8 Consult MAPEI's Technical Services Department for recommendations for embossing levelers and/or adhesives over existing flooring.
8.9 Refer to Technical Data Sheets for details on MAPEI product suitability over existing floor covering.

9. Cutback Adhesive Residues
9.1 Warning: Do not install over any adhesives, including asphalt cutback residue, that may contain asbestos or may have been used to install flooring containing asbestos.
9.1.1 Warning: Do not sand or remove any existing resilient floors or cutback adhesive that contains asbestos fibers or crystalline silica. For removal instructions, refer to the Resilient Floor Covering Institute's Recommended Work Practices. Follow all local, state and federal regulations and industry standards when mechanical removal is required.
9.2 Do not use chemical solvents to remove cutback residue.
9.3 Consult MAPEI's Technical Services Department for adhesive recommendations over cutback adhesive residue.
9.4 Refer to Technical Data Sheets for details on MAPEI product suitability over properly prepared asphalt cutback residues.

10. MAPEI Surface Preparation Products
10.1 Using a total MAPEI installation system, including recommended MAPEI surface preparation products, helps to achieve a successful installation when used according to the instructions in the products' Technical Data Sheets.
10.2 Use a MAPEI moisture-vapor emission reduction product to treat concrete slabs with moisture issues. Consult MAPEI's Technical Services Department for product recommendations. Refer to Technical Data Sheets for details.
10.3 Use MAPEI patching compounds to fill holes, voids, cracks and depressions in concrete and approved wood underlayments. Refer to Technical Data Sheets for details.
10.4 Use MAPEI patching compounds in conjunction with MAPEI patching compound additives to cover over properly prepared and firmly bonded noncushioned sheet vinyl (vinyl or urethane wear layers, one layer only and not perimeter-glued), VAT/VCT (one layer only), ceramic tile, cement terrazzo and cutback adhesive residue. Refer to Technical Data Sheets for details.
10.5 Use MAPEI skim-coating compounds to smooth out rough-textured surfaces and correct irregularities in concrete and approved wood underlayments. Refer to Technical Data Sheets for details.
10.6 Use MAPEI self-leveling underlayments with the appropriate MAPEI primer(s) to level large areas over concrete and approved wood underlayments. In many cases, using MAPEI’s self-leveling systems can be more economical than applying multiple lifts of patching compound. Refer to Technical Data Sheets for primer recommendations, installation instructions and details.

10.7 Use MAPEI repair products for building up surfaces or for thick repair applications. Refer to Technical Data Sheets for details.

10.8 Use MAPEI exterior concrete repair products to correct imperfections in exterior concrete surfaces before the application of outdoor carpet and outdoor rubber flooring. Refer to Technical Data Sheets for details.

Contact MAPEI’s Technical Services Department regarding installation of MAPEI adhesives and/or MAPEI surface preparation products over special substrates or membranes, or for conditions not listed.