



SUGGESTED SPECIFICATION

NOTES TO SPECIFIER

1. Specify white KER 318 / GRANI/RAPID, 2 component flexible fast-setting latex hydraulic mortar system or (optional) white KERALASTIC / KERABOND, 2 component flexible acrylic thin-set mortar system for interior and exterior wall installation of INTERSTYLE GLASSTYLE tiles over most types of substrates including completely cured concrete, brick, masonry block, cementitious backer unit, gypsum wallboard or plaster (for interior dry areas only) and for interior countertops in dry areas, over a well-prepared A.P.A. rated GROUP 1, EXTERIOR grade plywood, C.C. plugged or better, conforming to U.S. Product Standard PSI-95 [or a COFI classified EXTERIOR GRADE plywood, SELECT or (SEL TF) conforming to CSA 0121 standard for Douglas fir.]
2. DO NOT SPECIFY any of these mortar systems over, presswood, particle board, chipboard, masonite, Lauan, Asbestos board, metal, and ALL dimensionally unstable materials which are not suitable substrates to receive INTERSTYLE GLASSTYLE tiles.
3. Specify exclusively PLANICRETE 50 as a primer/sealer for wall installations when INTERSTYLE GLASSTYLE tiles are to be installed over plaster or drywall.
4. Specify KER 800 unsanded polymer-modified grout mixed with water only when INTERSTYLE GLASSTYLE tiles are specified with joints of 1,5 mm (1/16") to 3 mm (1/8") wide, for INTERIOR installations only. Specify joints to be no less than 1,5 mm (1/16") wide. DO NOT ALLOW BUTT JOINTS.
5. Specify KERAPOXY stain-resistant 100% solids epoxy grout for interior installation only of INTERSTYLE GLASSTYLE where stain and chemical resistance is desired. Specify joints to be 5 mm (3/16") to 10 mm (3/8") wide. DO NOT ALLOW BUTT JOINTS.
6. Specify KER 700 ULTRACOLOR fast-curing polymer modified hydraulic tile grout mixed with water when INTERSTYLE GLASSTYLE tiles are specified with joints of 3 mm (1/8") to 25 mm (1") wide for INTERIOR, EXTERIOR or IMMERSION CONDITIONS.
7. INTERSTYLE GLASSTYLE tiles and its setting and grouting mortars do not constitute a waterproof barrier and should not be considered as a replacement for a waterproof membrane. For information concerning PRP 315 thin load-bearing trowel-applied waterproof membrane, contact your local MAPEI representative.
8. This is a total system. Specify all materials by name, number, and application as herein described to ensure that specifications do not differ from the manufacturer's instructions.
9. **Special Conditions: For Exterior installation or in areas subject to prolonged water immersion such as pools, fountains, spas, etc., specify ONLY KER-200 Polymer-Modified Sanded Grout for grouting pre-mounted INTERSTYLE GLASSTYLE tiles with joints 1.5 to 2 mm (1/16" to 5/64") wide.**
10. **INSERT THE FOLLOWING SPECIFICATION IN THE CONCRETE SECTION OF THE SPECIFICATION**
 - 10.1 No sealer or curing compound shall be used on concrete to be covered with tiles. Concrete shall be completely cured prior to the installation of the tiles. Concrete surfaces which are to receive a tile finish, shall have a wood float finished texture and shall be left level and true to a tolerance in plane of 3 mm in 2,4 m (1/8" in 8') for vertical walls. Areas requiring filling, patching or levelling shall be prepared by the general contractor using PLANICRETE 50 multipurpose latex additive, Portland cement and sand in strict accordance with the manufacturer's instructions.
 - 10.2 All surfaces to receive tiles shall be left clean, and free of dust, oil, grease, paint, tar, wax, curing agent, primer, sealer, form release agent or any other deleterious substance and debris which may prevent or reduce adhesion.
 - 10.3 The general contractor shall be responsible for the removal of any such contaminant prior to the execution of the work.

SPECIFICATION

SECTION 09

PART 1. GENERAL

1.01 SUMMARY

A. Work performed under the requirements of this section shall be subject to all conditions set forth under PART 1 "GENERAL CONDITIONS" as applicable to this portion of the work.

1.02 REFERENCES

A. AMERICAN NATIONAL STANDARDS INSTITUTE (A.N.S.I.)

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|-------------|---|
| 1. A-118.3 | Chemical resistant, water cleanable tile setting and grouting epoxy |
| 2. A-118.4 | Fast-setting latex hydraulic thin-set mortar & latex Portland cement mortar |
| 3. A-118.6 | Ceramic tile grouts |
| 4. A-118.9 | Cementitious backer units (C.B.U.) |
| 5. A-118.10 | Thin, loadbearing waterproofing membrane |
| 6. A-108.5 | Installation of ceramic tile with latex thin-set mortar |
| 7. A-108.10 | Installation of grout in tilework |
| 8. A-108.11 | Interior installation of cementitious backer units |

B. TILE COUNCIL OF AMERICA INC.

1. Handbook for Ceramic Tile Installation

1.0.3 SUBMITTALS

A. Product data: submit manufacturer's technical information and installation instructions for all specified materials.

B. SAMPLES

Prior to commencing the work, submit for approval four (4) representative tile samples of each type, finish and color mounted on a 12 mm (1/2") EXTERIOR grade plywood using the specified mortar and grouted with the specified grout. These samples shall be of current production, properly identified, clean and representative of the appearance of the finished work.

1.0.4 QUALITY ASSURANCE

A. Provide tile, grout and setting materials from one source. Additives, installation materials and grouts shall be from the same manufacturer.

B. All technical inquiries on installation shall be directed to MAPEI at 1-800-992-6273 or 1-800-426-2734.

1.0.5 DELIVERY, STORAGE AND HANDLING

A. Deliver and store tiles in a manner to prevent chipping, breakage, staining or any other damage.

B. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Prevent damage or contamination to materials by water, moisture, freezing, excessive heat, foreign matter or other causes. Do not stir any frozen material until it has completely thawed.

C. Provide heated and dry storage facilities on site.

D. Deliver and store all materials on site at least 24 hours before work begins.

1.0.6 ENVIRONMENTAL REQUIREMENTS

A. Maintain environmental conditions and protect work during and after installation. Comply with trade standards and manufacturer's printed recommendations.

B. Turn off all forced ventilation and radiant heating systems and protect the work against drafts during installation and for at least 72 hours after completion.

C. When necessary, build a temporary shelter and use indirect auxiliary heaters to maintain an adequate temperature level in the working environment.

D. Exhaust temporary heaters to exterior to prevent damage to the work from carbon dioxide emanations.

E. Maintain temperature in tiled areas at not less than 10°C (50°F) or more than 35°C (95°F) during installation and for 7 days after completion, unless higher temperatures are required by ANSI A-108 installation standards or manufacturer's written instructions.

PART 2. PRODUCTS *(Select appropriate product or products, delete all others)*

2.0.1 MATERIALS

A. IMPERVIOUS GLASS TILES: INTERSTYLE GLASSTYLE TILES (specify size, thickness, edge, finish and color) as manufactured in Canada by INTERSTYLE CERAMIC AND GLASS LTD., 8051 Enterprise St., Burnaby, BC, Canada, V5A 1V5

2.0.2 SETTING MATERIALS

A. FLEXIBLE FAST-SETTING LATEX HYDRAULIC MORTAR: *(See Notes to Specifier 1, 2, 7, and 8)* KER 318 GRANI/RAPID, two-component, flexible latex hydraulic thin-set mortar conforming to ANSI A-118.4 standard for fast-setting mortars, as manufactured by MAPEI. COLOR: WHITE.

B. FLEXIBLE ACRYLIC LATEX PORTLAND CEMENT MORTAR: *(See Notes to Specifier 1, 2, 7, and 8)* KERALASTIC/KERABOND, COLOR: WHITE, two component flexible mortar system conforming to ANSI 118.4 standard, as manufactured by MAPEI .

C. ACCESSORIES

1. **DRYWALL LATEX PRIMER AND PORTLAND CEMENT GROUT ADDITIVE:** *(See Note to Specifier 3)* PLANICRETE 50, as manufactured by MAPEI.

2. **WATERPROOF MEMBRANE:** *(See Note To Specifier 7)* PRP 315 thin, loadbearing, trowel-applied waterproof membrane conforming to ANSI A-118.10 standard, as manufactured by MAPEI.

2.0.3 GROUTING MATERIALS

A. UNSANDED TILE GROUT- *(See Note to Specifier 4)* KER 800, polymer-modified unsanded Portland cement grout conforming to ANSI A-118.6 standard, as manufactured by MAPEI. Color: (specify color.... or) as selected by the consultant.

B. FAST-CURING SANDED TILE GROUT: *(See note to specifier 6)* KER 700 ULTRA / COLOR polymer-modified hydraulic sanded tile grout conforming to ANSI 118.6 standard as manufactured by MAPEI. Color (specify color ...or) as selected by the consultant.

C. STAIN RESISTANT EPOXY GROUT: *(See note to specifier 5)* KERAPOXY, 100% solids epoxy mortar and grout conforming to ANSI A-118.3 standard as manufactured by MAPEI. Color: (specify color ... or) as selected by the consultant.

D. SANDED TILE GROUT- *(See Note to Specifier 9)* KER 200, polymer-modified sanded Portland cement grout conforming to ANSI A-118.6 standard, as manufactured by MAPEI. Color: (specify color.... or) as selected by the consultant.

E. WATER: Clean, cold and potable.

2.0.4 MIXING FOR SETTING AND GROUTING MATERIALS

A. Use clean mixing containers.

B. Use a low speed mixer *(approximately 300 RPM)*.

C. Mix all installation and grouting materials in strict accordance with the manufacturer's mixing instructions.

PART 3. EXECUTION

3.0.1 EXAMINATION

A. Before work commences, examine the areas to be covered and report any deficiency or adverse condition in writing to the general contractor and the architect. Do not proceed with the work until surfaces and conditions comply with the requirements indicated in the manufacturer's instructions and in ANSI A-108.5 specification. For more details see "TCA HANDBOOK FOR CERAMIC TILE INSTALLATION".

3.0.2 SURFACE PREPARATION

A. GENERAL

1. All supporting wall surfaces shall be structurally sound, solid, stable, level, plumb and true to a tolerance in plane of 3 mm in 2,4 m (1/8" in 8") for walls and 6,3 mm in 3 m (1/4" in 10') for horizontal surfaces. They shall be dry, clean and free of dust, oil, grease, paint, tar, wax, curing agent, primer, sealer, form release agent or any deleterious substance and debris which may prevent or reduce adhesion.
2. Mechanically sand and scarify the substrate to completely remove all paint, loosely bonded topping, loose particles and construction debris.
3. Neutralize strong acid or alkali from the substrate prior to the application of the mortar.
4. All substrates shall be dry. The moisture content shall not exceed 5%.

B. CONCRETE

1. Concrete surfaces shall be dry, completely cured and free of hydrostatic conditions and/or moisture problem.
2. New concrete surfaces shall be wood floated or broom finished.
3. Over excessively dry porous concrete, keep the concrete substrate continuously moist for at least 24 hours before work begins. Remove all excess water or standing water allowing the surface to become almost dry before installing the levelling coat or setting mortar.

C. CEMENTITIOUS BACKER UNITS (C.B.U.)

When installed by others the C.B.U. shall conform to the quality standard requirements of ANSI A-118.9. It must be installed according to the C.B.U. manufacturer's instructions and in strict accordance with ANSI A-108.11 standard for INTERIOR installation of cementitious backer units.

D. GYPSUM WALL SURFACES *(Interior dry areas only)*

Prime all drywall and plaster wall surfaces with PLANICRETE 50 multi-purpose latex and let dry completely before applying the mortar (in normal condition 30-45 minutes or until dry to the touch).

E. RESURFACING OLD SURFACES *(Contact MAPEI for recommendations on old surfaces)*

Ceramic tile shall be sound, solid, well bonded, flawless, stripped clean and free of dust, wax, grease, sealer, soap residue and all other deleterious substances which may reduce or prevent adhesion.

F. PLYWOOD *(Specify only for interior residential countertops in dry areas)*

1. Plywood substrate and underlayment shall be A.P.A. rated GROUP 1, EXTERIOR GRADE plywood C.C.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 0121 standard for Douglas fir. Presswood, particle board, chipboard, masonite, Luan, asbestos board, and ALL dimensionally unstable materials are not acceptable substrates.
2. Plywood surfaces shall be installed smooth face-up. Use exclusively new plywood.
3. The plywood shall be screwed 15 cm (6") O.C. around the perimeter and 20 cm (8") O.C. in each direction throughout the body of the panel.
4. The adjacent edges of the plywood sheets shall not be more than 0,75 mm (1/32") above or below each other.

3.0.3 INSTALLATION

- A. Mix together all tiles from the different cartons prior to installation.
- B. Install INTERSTYLE GLASSTYLE tiles following the general outline procedure set forth in ANSI A-108.5 specifications for installation.
- C. Use a notched trowel to apply the cementitious adhesive and in all cases "back-butter" simultaneously each piece with the flat edge of the trowel to provide a void-free installation with no unsupported areas and 100% contact with the mortar-bed. Lay the tiles while both mortar surfaces are fresh. Do not allow mortar to dry or skin over on either surfaces before laying tiles.
- D. On walls, start installing at the lowest portion of the wall. Support the tiles with wedges, pegs or ropes to prevent sagging.
- E. On all interior walls where INTERSTYLE GLASSTYLE tiles are specified to be grouted with unsanded wall grout, install tiles leaving a regular even spacing between tiles of at least 1,5 mm (1/16") and a maximum of 3 mm (1/8"). No but joints shall be permitted.
- F. On the exterior portion of the work and on interior counter tops that will be grouted with KERAPOXY Grout, install tiles leaving a regular even spacing between tiles of at least 3 mm (1/8"). *(Specify joint width if wider joints are desired)*. Apply dry-set mortar to the back of each tile and ensure 100% coverage of the tile back.
- G. Beat tiles in thoroughly and sufficiently to cause mortar ribs or notches to come together into a continuous void free bed and to allow the mortar to flow up partially into the joint space to approximately 1/3 the thickness of the tile.
- H. Remove any excess setting material from the joint area so that 2/3 of the depth of the tile is available for grouting.
- I. Remove smudges or smears of setting material from the surface with a damp sponge or cloth immediately after final adjustment and beat-in while the mortar is fresh.

3.0.4. EXPANSION AND CONTROL JOINTS

- A. Carry existing joints in the concrete walls through the covering surfaces.
- B. Install control joints where the tile abuts restraining surfaces, around the perimeter of the tilework and where two substrates of different composition meet in the same place.
- C. Install and space expansion and control joints in all directions according to the strict instructions of the Tile Council of America's Detail #EJ-171 as described in the latest edition of their HANDBOOK FOR CERAMIC TILE INSTALLATION. Interior installations shall have expansion joints spaced a maximum of 6 m (20') in each direction. Exterior areas shall have expansion joints spaced a maximum 5 m (16') in each direction. Expansion joints shall be raked or cut through the setting bed to the supporting slab or structure. Optimum ratio of joint layout, length to width, is 1:1, and shall not be greater than 2:1. CAUTION: CONTROL JOINTS:

It must be clearly pointed out that under no circumstance should the control joint be cut in after the tile has been installed as this defeats the object of the exercise. The installer should tile up to the control joint and stop. If required, cut the tile and commence tiling from the opposite side. Before continuing, rake the joint clean.

- D. Install an approved compressible bead and sealant to caulk expansion and control joints following the sealant manufacturer's strict instructions.

3.0.5 **GROUTING** (See Notes To Specifier 4, 5 and 6)

- A. Except where tiles are installed with KER 318/GRANI/RAPID fast-setting flexible latex hydraulic mortar, grout no sooner than 24 hours after installation.
- B. Where tiles are installed with KER 318/GRANI/RAPID fast-setting flexible latex hydraulic mortar, grout no sooner than 3 to 4 hours after installation.
- C. Do a test area and obtain the architect's written approval before proceeding with the grouting of the entire work.
- D. On interior walls where joint widths are specified to be 1,5 mm (1/16") to a maximum of 3 mm (1/8"), install KER 800 UNSANDED polymer-modified grout as specified.
- E. Where joints widths are specified to be 3 mm (1/8") and wider, install KER 700 ULTRA/COLOR fast-curing polymer-modified hydraulic tile grout.
- F. Install grout in strict accordance with MAPEI's written instructions and following the general outline procedure of ANSI A-108.10 for latex Portland cement grouts.
- G. Install KERAPOXY Stain Resistant Epoxy Grout where specified (state area where KERAPOXY grout is desired)... Mix epoxy grout in complete unit batches. Do not mix part units. Follow the grout manufacturer's instructions and the general outline procedure of ANSI A-108.6 for handling, mixing, grouting and cleaning epoxy grouts.

3.0.6 **CLEANING**

- A. Remove all grout and mortar residue immediately while work progresses and before the materials harden on the tile surface.
- B. Clean tiles completely leaving no apparent cement laitance or epoxy film on the surface of the tile. DO NOT ACID WASH, especially where colored grouts are specified.

3.0.7 **PROTECTION**

- A. **Flexible fast-setting latex hydraulic mortar installation:**
 - 1. Protect finished work against weather, freezing and complete water immersion for at least 72 hours after completion of the work.
 - 2. Walls: protect walls from impact, vibration and hammering on adjacent and opposite walls for at least 24 hours after installation.
- B. **Flexible acrylic latex Portland cement mortar installation:**
 - 1. Protect finished work against weather, freezing and complete water immersion for at least 21 days after completion of the work.
 - 2. Walls: protect walls from impact, vibration and hammering on adjacent and opposite walls for at least 14 days after installation.
- C. When grouted with KERAPOXY, protect finished work from food products and chemical stains for 10-14 days. Protect against complete immersion for at least 21 days after completion of the work.
- D. Since temperature and humidity during and after installation affect the final curing time of all cement based and epoxy materials, allow for extended periods of cure and protection when temperatures drop below 60°F (15°C) and/or when the relative humidity is higher than 70%.

END OF SECTION