



CLAY PAVERS



DRIVEWAYS



PATIOS



WALKWAYS



Clay pavers add warmth and hospitality to any indoor or outdoor space. The classic clay paver can be elegant, rustic or traditional. A variety of colors, textures and installation patterns make them a highly creative and adaptable paving surface.

Mica-Tile is designed for interior and exterior use on horizontal surfaces. Mica-Tile should be laid according to specific application (see details) and are intended for non-vehicle applications.

Clay Pavers are designed for setting dry on a sand bed where thickness is desired for traffic and physical locking of units. They may be used with either the smooth or wire-cut side as the wearing surface. The net dimensions of 4 x 8 inches permit patterns bonds where mortar joints are not used. The various sizes allow for use in both pedestrian and light vehicle applications.

PRODUCT DATA*

	Coverage	Units per Pallet	Coverage per Pallet	Weight per Piece	Weight per Pallet	Use
1" Mica-Tile	4.5 / ft ² (48.44 / m ²)	1,296	288 ft ² (26.86 m ²)	2 lb (0.9 kg)	2,642 lb (1,198.39 kg)	*
1 ½" Paver	4.5 / ft ² (48.44 / m ²)	987	166.7 ft ² (15.48 m ²)	3.6 lb (1.63 kg)	3,603 lb (1635.74 kg)	**
2 ¼" Paver	4.5 / ft ² (48.44 / m ²)	576	128 ft ² (11.89 m ²)	5.5 lb (2.49 kg)	3,218 lb (1,459.66 kg)	***
2 ¾" Paver	4.5 / ft ² (48.44 / m ²)	576	128 ft ² (11.89 m ²)	6 lb (2.72 kg)	3,506 lb (1,590.29 kg)	***

All **Weight per Pallet** noted above include a 50 lb pallet weight.

* Designed for mortar-set, pedestrian applications only.

** Designed for mortar-set or sand-set, pedestrian applications only.

*** Designed to be sand-set. May be used for pedestrian and light vehicular applications.

SPECIFICATION

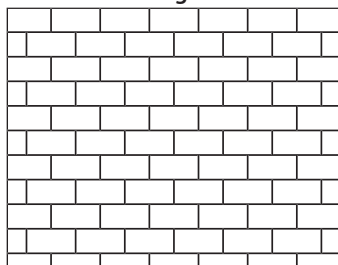
Mica-Tile is manufactured to industry standard specifications ASTM: C 902-04, Class MX, Type II

1 ½" Paver Tile is manufactured to industry standard specifications ASTM: C 902-04, Class SX, Type I

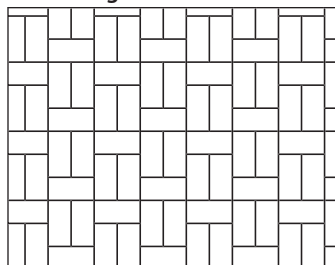
Roman Clay Pavers are manufactured to industry standard specifications ASTM: C 902-04, Class SX, Type II

INSTALLATION PATTERNS

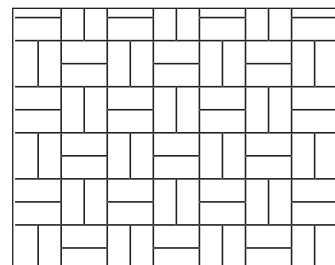
Running Bond



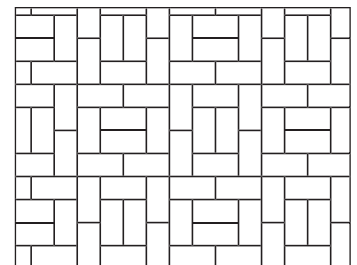
Single Basketweave



Double Basketweave

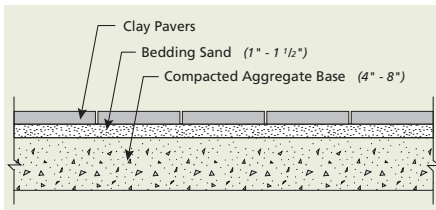


Boxed Basketweave



SAND-SET

Exterior Application



Excavation: Excavate to the design levels.

Compact Subgrade: Compact the subgrade to at least 95% of standard Proctor density as specified in ASTM D 698.

Base Rock: Place and compact a base of $\frac{5}{8}$ " (16 mm) minus crushed rock in layers of not more than 2" (100 mm) to a smooth uniform surface to the grade and cross section required. The minimum surface tolerance of the compacted base should be $\pm \frac{3}{8}$ " (± 10 mm) over a 10 ft (3 m) straightedge. A geotextile may be placed below the base rock as needed.

The thickness of the base materials is determined by traffic, soil type, climate, drainage, and moisture. Pedestrian

applications should have a minimum base thickness of 4" (100 mm) after compaction. Residential driveways should have a minimum sub-base thickness of 6" (150 mm) after compaction.

Edge Restraint: Install the edge restraint system to prevent settling and spreading. Follow specifications and manufacturers instructions for installing edge restraints.

Bedding Sand: Bedding sand under pavers should meet ASTM C 33 or CSA A23.1 specifications. Bedding sand should be spread and screeded to a thickness of 1 to 1 $\frac{1}{2}$ inches (25–40 mm). Use screed pipes and a straight and true strike board to level the bedding sand.

Lay Pavers: Begin in one corner of the project and begin laying pavers in the desired pattern, moving outward in a triangular pattern. Chalk lines snapped on the bedding sand or string lines pulled across the pavers can be used to maintain straight joint lines. The joint widths between pavers should be approximately

$\frac{1}{16}$ to $\frac{1}{8}$ inches (2–3 mm). Cut pavers should be used to fill in gaps along the edges of the project. Be sure to mix pavers from multiple pallets to achieve a consistent color blend.

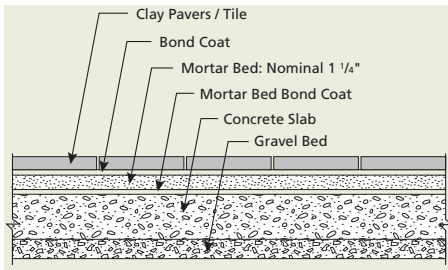
Compact: After placing an area of pavers, compact them using a vibrating plate compactor capable of exerting 3,000–5,000 lbs. (1300–2200 kN) of centrifugal compaction force operating at 75–90 hertz (use a 3,000 lb. compactor for 1 $\frac{1}{2}$ " Pavers). A rubber/plastic mat should be used on the compactor. Make at least two passes to insure that pavers have been seated in the compacted bedding sand.

Fill Joints: Sweep dry joint sand into the paver joints and compact the pavers again until the joints are full. Compaction should be within 3 ft. (1 m) of an unrestrained edge or laying face. At the end of each day, all pavers within 3 ft. (1 m) of the laying face should be compacted. Install any remaining edge restraints.

Source: Brick Industry Association - Flexible Brick Paving

CEMENT MORTAR, BONDED*

Exterior Application



Recommended Uses

Exterior floors, decks or patios where membrane is not used and where positive drainage below slab is provided.

Limitations

Although this is the best known method of installation for a walkway, it is not reliable in areas where the mortar-bed will be subjected to freeze-thaw cycles.

Requirements

- sloped slab to provide complete surface drainage
- gravel bed or other means of drainage below slab
- expansion joints are mandatory
- cover completed tile/paver work and keep damp for 3–7 days

Materials

- portland cement: ASTM C-150 Type 1
- sand: ASTM C-144
- water: potable
- mortar: 1 part portland cement, 4 to 5 parts damp sand by volume
- bond coat: portland cement paste on a mortar bed that is still workable, or dry-set mortar or latex-portland cement mortar on a cured bed

- grout: ANSI A118.6, specify type
- mortar bed bond coat: portland cement slurry.

Preparation by Other Trades

- provide subsurface drainage
- slope slab for complete drainage
- slab to have steel trowel and fine broom finish with no curing compounds used (when used, mechanical scarifying is necessary).
- max. variation in the slab shall not exceed $\frac{1}{4}$ " in 10'-0" from the required plane

Expansion Joint

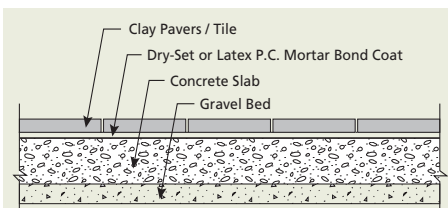
Architect must specify expansion joints and show location and details on drawings.

Installation Specifications

- paver/tile: ANSI A108.1A, .1B or .1C
- grout: ANSI A108.10

DRY-SET MORTAR OR LATEX-PORTLAND CEMENT MORTAR*

Exterior Application



Recommended Uses

Exterior floors, decks or patios where membrane is not used and where positive drainage below slab is provided.

Requirements

- sloped slab to provide complete surface drainage

- gravel bed or other means of drainage below slab
- expansion joints are mandatory
- bond coat 3/32" min.
- cover completed tile/paver work and keep damp for 3 to 7 days

Materials

- dry-set mortar: ANSI A118.1
- latex-portland cement mortar: ANSI 118.4
- grout: ANSI A118.6, specify type

Preparation by Other Trades

- provide subsurface drainage
- slope slab for complete drainage
- slab to have steel trowel and fine broom

finish with no curing compounds used (when used, mechanical scarifying is necessary).

- max. variation in the slab shall not exceed $\frac{1}{8}$ " in 10'-0" from the required plane

Expansion Joint

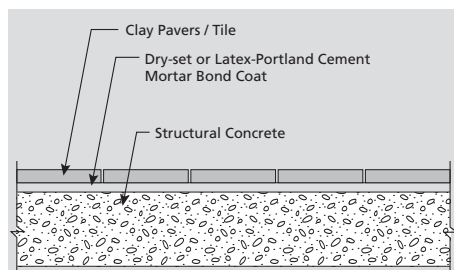
Architect must specify expansion joints and show location and details on drawings.

Installation Specifications

- paver/tile: ANSI A108.1A, .1B or .1C
- grout: ANSI A108.10

DRY-SET MORTAR OR LATEX-PORTLAND CEMENT MORTAR*

Interior Application



Recommended Uses

- on plain, clean concrete
- on slab-on-grade construction where no bending stresses occur.
- See **F111 Notes** in sidebar.

Limitations

- Method F111 is the preferred method over precast concrete floor systems, post-tensioned concrete floor systems and other floors subject to movement or deflection.
- Method F113 may be suitable for above-grade structural slab installations when specific mortar and grout products recommended by the manufacturer are specified. Not all modified mortar and grout products are suitable for this application.

Requirements

- floor systems over which tile will be installed shall be in conformance with the IRC for residential applications, the IBC for commercial applications, or applicable building codes.
- slab to be well cured, dimensionally stable and free of cracks, waxy or oily films and curing compounds.
- bond coat $\frac{3}{32}$ " min.

Materials

- mortar—use ANSI A118.1 or A118.4 for slab-on-grade installations; *use only a manufacturer's designated mortar* for above-grade structural slabs.
- grout—use ANSI A118.3, A118.6, A118.7, or A118.8 for slab-on-grade installations; use only a manufacturer's designated mortar for above-grade structural slabs.

Preparation by Other Trades

- slab to have steel trowel and fine broom finish free of curing compounds (when used, mechanical scarifying is necessary).
- slope, when required, to be in subfloor
- max. variation in the slab— $\frac{1}{4}$ " in 10'-0" and $\frac{1}{16}$ " in 1'-0" from the required plane

Movement Joint (Architect must specify type of joint and show location and details on drawings)

- follow EJ171, page 78, for slab-on-grade installations
- above-grade structural slabs require exterior joint spacing; perimeter joints are mandatory

Installation Specifications

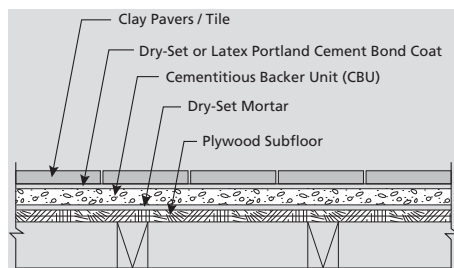
- paver/tile: ANSI A108.5
- grout: ANSI A108.6, A108.9, or A108.10.

F111 Notes

For tile bonded directly to a waterproof membrane, follow Method F122.

DRY-SET MORTAR OR LATEX-PORTLAND CEMENT MORTAR*

Interior Application



Recommended Uses

- over structurally sound plywood where light weight construction is a factor
- where water resistance is desired
- eliminates necessity of recessing subfloor to accommodate portland cement mortar bed

Limitations

- will provide bond for presanded dry-set mortar or latex-portland cement mortar only
- waterproof membrane shall be provided where a waterproof floor is required. Follow manufacturer's installation recommendations

Requirements

- design floor areas over which tile is to be applied to have a deflection not greater than $\frac{1}{360}$ of span. Make allowance for

live load and impact as well as all dead load, including weight of the tile and setting bed

- maximum spacing of floor joists is 16" o.c.
- $\frac{1}{8}$ " wide spacing between units to be filled solid with dry-set or latex-portland cement mortar
- use dry-set portland cement mortar to establish the supporting plane of the CBU
- units to be fastened through subfloor into joists with galvanized nails, screw type nails, or other corrosion-resistant fasteners
- surface of units to be clean and free of dirt, dust or oily film

Materials

- cementitious backer unit: ANSI A118.9
- dry-set mortar: ANSI A118.1
- latex-portland cement mortar: ANSI 118.4
- grout: ANSI A118.6, specify type

Preparation by Other Trades

- subfloor: $\frac{1}{8}$ " exterior grade plywood on joists at 16" o.c.
- max. variation in plywood surface shall not exceed $\frac{1}{8}$ " in 10'-0" from the required plane

Expansion Joint

Architect must specify expansion joints and show location and details on drawings.

Installation Specifications

- paver/tile: ANSI A108.5
- grout: ANSI A108.10
- cementitious backer units: ANSI A108.11

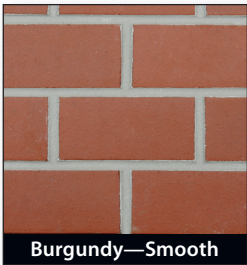
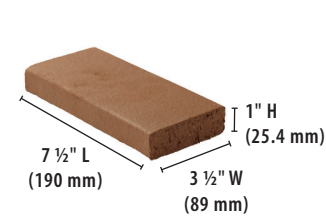
* Source: Copyright ©2009 by Tile Council of North America

** Source: 2003-2004 Handbook for Ceramic Tile Installation

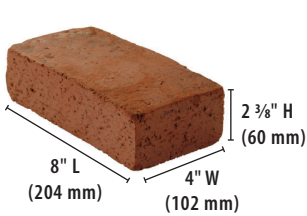
STOCKING COLORS*

For more information about available colors, please contact a sales representative or visit www.mutualmaterials.com. Custom colors may be restricted by the size of the order or project.

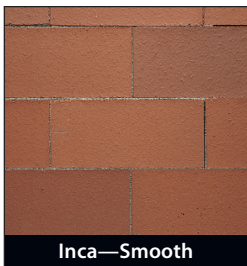
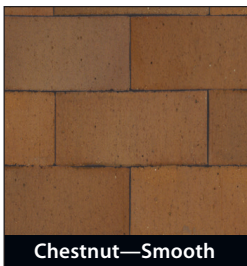
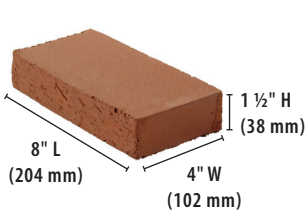
1" MICA TILE®: 7 ½" L x 3 ½" W x 1" H (To be used in mortar-set applications only.)



ROMAN CLAY PAVERS: 8" L x 4" W x 2 ¾" H



CLAY PAVERS: 8" L x 4" W x 1 ½" H



MUTUAL MATERIALS LOCATIONS

For product information and customer service, call 1-888-MUTUALØ (688-8250).

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