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Glossary

ABRASION RESISTANCE CLASSIFICATION: ASTM C-1027 describes the standard test method for determining visible abrasion resistance of glazed ceramic tile. Class 0 - Generally not recommended for use on floors; Class I - Light Traffic, for residential bathroom floors; Class II - Medium - Light Traffic, residential interiors with the exception of kitchens, stairs, landings and areas near external entries; Class III - Medium - Heavy Traffic, all residential applications. Commercial applications which are similar in traffic to residential applications. Specifically excepted are areas of prevalent circulation or turning points; Class IV - Heavy Traffic, all residential and most commercial applications such as the public areas of exhibition halls, hotels, restaurants, supermarkets, shops and schools; Class IV - Extra Heavy Traffic, all residential and most commercial applications similar to class IV where extra durability may be required.

ACRYLIC: A general class of resinous polymers used as additives for thin-set mortar and grout.

AGGLOMERATED PRODUCT: A manmade stone product generally consisting of either crushed natural marble, natural granite or quartz chips with a matrix of resins and mineral pigments. The product is available in assorted tile sizes as well as large slabs.

ANSI: The United States has a standards body known as ANSI, which stands for the American National Standards Institute. This organization monitors the Accredited Standards Committee on Ceramic Tile (A108, A118, and A137) to ensure that a fair set of standards are developed for products, installation, and setting materials.

AGGREGATE: Granular material such as sand, gravel, or crushed stone, used with a cementing medium to form a hydraulic-cement or mortar.

AIR ENTRAINMENT: A sometime undesirable effect caused by high-speed mixing of cementitious materials weakening the bond.

APPARENT JOINT: Decorative feature that simulates grout lines or joints on a single tile, so that a large tile, for example, may appear to be four smaller tiles.

ASTM: ASTM International, originally known as the American Society for Testing and Materials. Voluntary standards development organization.

AUTOCLAVE: An environment of steam at high pressure used in the curing of cement products.

BALANCED CUTS: Cuts of tile at the perimeter of an area that are the same size.

BACKING: Any material used as a base over which ceramic tile is to be installed. See Substrate.

BACKER ROD: A close cell round foam strip used with sealants or caulk.

BEATING BLOCK: A machined piece of hardwood used to make tile flat when placed in mortar.

BAS RELIEF: Decorative technique in which design elements are sculpted or carved to be raised slightly from background.

BASE TILES: Trim tiles with a curved edge used at a perpendicular junction for desired sanitary or aesthetic design.

BEATING BLOCK: A block used to imbed tiles in a flat plane. The method used is called "beating in."

BED (TILE): Layer of mortar or other adhesive that covers the surface to be tiled and onto which the tiles are set.

BICOTTURA: Method for producing tile by firing it twice (first fire is for body, second is to fuse glazes or patterns in glaze onto the body). Usually, there are two glazes on the tile, first a non-transparent glaze on the body, then a transparent glaze on the surface.

BODY or BISQUE: The structural portion of a ceramic article, as distinct from the glaze, or the material or mixture from which the item is made.

BOND BREAKER: Any material that prevents adhesion.

BONDING MATERIAL: Any of the mortars or adhesives used to install ceramic tile. Choice of bonding material is determined by the selection of tile and requirements of area to be tiled.

BREAKING STRENGTH: Physical property that indicates the tile's ability to withstand loads. ANSI A137.1 requires minimum strength of 250 pounds for floor tile.

BULLNOSE: A trim tile with a convex radius on one edge. This tile is used for finishing the top of a wainscot or for turning an outside corner.

BUTTERING, BACK-BUTTERING: Applying bonding material directly to the back of a tile to provide additional coverage in the setting bed. Technique usually applied to large tiles.

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BUTTONBACK TILE: Small, button-like protrusions on the back of a ceramic tile.

BURN IN: The flat troweling of a substrate prior to using the notched side.

CAP: See Bullnose.

CEMENT: Usually refers to Portland cement which when mixed with an aggregate can become concrete or mortar which sets by chemical reaction.

CEMENT BODY TILES: Tiles with a structure made from a mixture of sand, gravel and water to form concrete.

CEMENTITIOUS: Having the properties of cement.

CERAMIC TILE: A flat cladding or building material, of relative thinness, composed of clays and fired to hardness at red heat or better. The face may be glazed or unglazed.

CHEMICAL RESISTANCE: The resistance offered by products to physical or chemical reactions as a result of contact with or immersion in various solvents, acids, alkalis, salts, etc.

CLADDING: Covering, particularly wall covering.

CLEAVAGE MEMBRANE: A sheet that allows for independent movement of a mortar bed.

CLINKER (KLINKER): Red body formed by either the extrusion process or dust pressing. Sometimes referred to as red stoneware. This tile can be glazed or unglazed with a water absorption of 0.7 percent.

COEFFICIENT OF FRICTION: Measurement, either dynamic or static, used to determine different aspects of slippage on a tiled plane. Measures include wet and dry conditions, speed of subject, required force to move subject, and critical angle of tiled surface. Area use and maintenance directly affect a tile's coefficient of friction. Current US standard under ANSI A137.1 is ASTM test method C1028 Static Coefficient of Friction, or SCOF. ISO standard is 10545-17; annex A, B, and C define methods for determining a tile's coefficient of friction.

COEFFICIENT OF RESTITUTION: Measurement used to determine a ceramic tile's impact resistance. (ISO 10545-5)

COLD JOINTS: Formed primarily between slab pours where the size of a concrete slab may be too large to be poured at one time.

CONDUCTIVE TILES: Tiles specially manufactured to absorb electrostatic charges and conduct them to ground, used in hospital operating rooms and computer installations.

COMPRESSIVE STRENGTH: The measured maximum resistance of a material to force, with measurement expressed in pounds.

COTTOFORTE: Pink to red body used for most decorated, double-fired tile (glazed).

COVE: A trim tile unit having one edge with a concave radius. A cove is used to form a junction between the bottom wall course and the floor or to form an inside corner.

CRAZING: The cracking that occurs in fired glazes or other ceramic coatings due to critical tensile stresses (minute surface cracks).

CREEP: Deformation due to sustained load.

CURING: Curing – Time or method required to assure satisfactory hydration of the cementitious materials.

CURING COMPOUND: A liquid applied to the surface of concrete to retard the loss of water.

DECK MUD: Also known as Dry Pack, a mortar mixture using a minimal amount water and firmly compacted.

DECORATIVE TILES: Ceramic tile with a decoration on the surface.

DEFLECTION: - Movement of floors. Ceramic tile industry guidelines call for deflection less than $L/360$ or $1/360$ of the span. This applies to concrete floors, floor joists and subfloor panels.

DIMENSIONAL STANDARDS FOR CERAMIC TILES: ISO standards for ceramic tiles respective class regarding length, width, thickness, straightness of sides, rectangularity, and surface flatness. (ISO 13006 normative annex).

DUTCHMAN: Two tiles cut and used as a filler when tile less than half size is not possible to balance cuts.

DUST PRESSED TILES: Tiles formed by the dust pressed method in which the finely milled raw materials are shaped in molds at high pressure before firing.

DRY-SET MORTAR: A mixture of Portland cement with sand and additives which is used as a bond coat for setting tile. Normally, when this mortar is used, neither the tile nor the walls have to be soaked during installation.

EFFLORESCENCE: The residue deposited on the surface of a material (usually the grout joint) by crystallization of soluble salts.

ELASTOMERIC: Any of various elastic substances resembling rubber.

EMBOSSED: A decoration in relief or excised on the wear surface of the tile.

EXPANSION JOINTS: Used in tile installations over all cold joints and saw-cut control.

EPOXY: Resin material used in mortars and grouts for thin-set tile installations.

EUROPEAN TILE STANDARDS (GROUP A, GROUP B): Used by European Manufacturers in compliance with the European Tile Standards (CEN). Group “A” tiles are made by the extrusion process. Group “B” tiles are made by the dust pressed method. These letters are preceded by the Roman numerals which indicate water absorption. I = 0-3 percent, IIa = 3-6 percent, IIb = 6-10 percent and III = over 10 percent.

EXTRUDED TILE: A tile unit that is formed when plastic clay mixtures are forced through a pug mill opening (die) of suitable configuration, resulting in a continuous ribbon of formed clay. A wire cutter or similar cut-off device is then used to cut the ribbon into appropriate lengths and widths of tile.

FAIENCE TILE: Glazed or unglazed tile, generally made by the plastic process with characteristic variation in the face, edges and glaze. These variations produce a handcrafted, decorative effect.

FEATURE STRIP: A narrow strip of tile that has a contrasting color, texture or trim.

FIELD TILE: An area of tile covering a wall or floor. The field is usually bordered by tile trim.

FINISHES: Textural or visual characteristics of a tile surface. For glazed tile this may be bright or high gloss, satin or matte. For glazed or unglazed tiles, finish can be flashed, textured, polished, raised, embossed, dimpled, etched, scored, ribbed etc.

FIRING: The controlled heat treatment of ceramic tile in a kiln during the process of manufacture, to develop the desired properties.

FLEXURAL STRENGTH: A property of a material that indicates its ability to bend.

FLOAT COAT: The final mortar coat when using cement mortar on a wall.

FLOAT STRIP: Typically strip of wood about 2-inch thick and used as a guide for floating mortar surfaces.

FLOATING: A method of using a straight-edge to align mortar with float strips or screeds. This technique is used by specialists when they are setting glass mosaic murals. Not correct in U.S.

FLOOR TILES: Glazed or unglazed tiles of sufficient strength, impact and abrasion resistance to withstand the weight and wear of foot traffic.

FURAN RESIN GROUT: A two-part grout system of resin and furan hardener used for grouting joints where hi-performance chemical resistance properties are desired.

GLASS MOSAIC TILES: Mosaic tiles composed of glass, rather than ceramic, material; mosaic tiles coated with a layer of colored or transparent glass.

GLAZE: A ceramic coating matured to the glassy state on ceramic tile. The term “glaze” also refers to the material or mixture from which the coating is made. **BRIGHT GLAZE:** A high gloss coating with or without color. **CLEAR GLAZE:** A transparent glaze with or without color. **CRACKLE GLAZE:** Special glaze featuring fine-line ‘cracks’ for antique effect. **CRYSTALLINE GLAZE:** A glaze that contains microscopic crystals. **FRITTED GLAZE:** A glaze in which a part or all of the fluxing constituents are prefused. **MATTE GLAZE:** A low-gloss glaze with or without color. **OPAQUE GLAZE:** A non-transparent glaze with or without color. **RAW GLAZE:** A glaze compounded primarily from raw constituents. It contains no prefused materials. **SEMI-MATTE GLAZE:** A medium-gloss glaze with or without color. **SPECKLED GLAZE:** A glaze containing granules of oxides or ceramic stains that are contrasting colors.

GLAZE FIT: The stress relationship between the glaze and body of a fired ceramic product

GLAZED TILE: Tile with a fused impervious facial finish composed of ceramic materials fused to the body of the tile, which may be non-vitreous, vitreous or impervious.

GRADE SORTING: Process in the production cycle when tiles are sorted to eliminate defective tiles, to separate higher quality tiles from lower, and to group tiles according to work size and shade.

GRES: Unglazed, red body, heavy duty tile. Usually low water absorption with a textured pattern on its face.

GROUT: A cementitious or other type material used for filling joints between tile.

HEAVY DUTY TILE: Tile suitable for areas where heavy pedestrian traffic is prevalent. Can be specified to meet higher test values as determined by job requirements.

IMPACT RESISTANCE: Ability of ceramic tile to resist breakage - either throughout the body or as surface chipping - as the result of a heavy blow. In general, ceramic tile is not a resilient material, and care should be taken to avoid dropping heavy or sharp objects on its surface. Glazed tiles are more susceptible to surface chipping than unglazed tiles. International Standards are established for the impact resistance of ceramic tiles by measuring their coefficient of restitution (ISO 105455). No U.S. Standard.

IMPERVIOUS TILE: Tile with water absorption of 0.5 percent or less. Also known as fully vitrified stoneware or porcelain stoneware.

IN/OUT CORNERS: Trim tile for turning a right-angle inside or outside a wall corner.

ISO STANDARDS: Standards established by the International Standards Organization to unify product standards and testing methods for ceramic tiles worldwide.

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JOINT FILLER: Another term for sanded floor grout. Can also be a compressible material used to prevent the infiltration of debris or used to provide support for sealants.

KEY IN: The flat troweling of a substrate prior to using the notched side.

LATEX: A liquid water emulsion of a polymers used to impart special properties such as adhesion and flexibility

LATEX-PORTLAND CEMENT GROUT: Combines Portland cement grout with a special latex additive.

LATEX-PORTLAND CEMENT MORTAR: A mixture of Portland cement, sand and a special latex additive which is used as a bond coat for setting tile.

LIPPAGE: A condition where one edge of a tile is higher than an adjacent tile.

LUGS: Protuberances attached to tiles to maintain even spacing for grout lines.

LUSTER: An iridescent decorative surface appearance on glazes, usually produced by the application of a very thin metal film, such as gold, silver, platinum or copper, over the coating surface.

MAJOLICA: Formerly, earthenware with an opaque luster glaze and over-glaze colored decorations. Currently describes any decorated earthenware with an opaque glaze.

MARBLE TILE: Marble cut into tiles, usually 3/8 inch to 3/4 inch thick. Available in various finishes, including polished, honed and split face.

MEXICAN PAVER TILE: Hand-made tiles that vary in color, texture and appearance and which are used mainly on floors. The terracotta like tiles are made in hexagon, octagon, elongated hexagon, fleur-de-lis, square and other shapes. Coated with various types of sealers to provide a wearing surface.

MOISTURE EXPANSION: The amount of expansion in a tile with water introduced into the tile body.

MONOCOTTURA TILES: Tiles produced by a single firing. Tiles may be glazed or unglazed.

MONOPOROSA TILES: Single-fired tiles with higher porosity and water absorption levels than traditional monocottura tiles.

MORTAR BED: A layer of mortar on which tile is set; also known as mud-set.

MOSAICS: Small tiles or bits of tile, stone or glass which are used to form a surface or a intricate pattern.

MOUNTED TILES: Tiles assembled into units or sheets by the manufacturer for easier installation. Back and edge mounted tiles are

bonded to material (mesh, paper, resin or other) that becomes a part of the installation. Face mounted tiles are bonded to a material that is removed prior to grouting.

MOVEMENT JOINTS: Essential for the success of most tile installations. Various methods require proper design and location of expansion joints. Also known as Expansion Joints.

NATURAL CLAY TILE: A ceramic mosaic tile or a paver tile made by either the dust-pressed or the plastic method from clays which produce a dense body and a distinctive slightly textured appearance.

NOMINAL SIZES: The approximate facial size or thickness of tile, expressed in inches or fractions of an inch.

NON-VITREOUS TILE: Tile with water absorption of more than 7 percent.

PAPER AND WIRE: Tar paper and wire mesh (or metal lath) that are used as a backing for the installation of tile.

PAVER TILES: Glazed or unglazed porcelain or natural clay tile formed by the dust-pressed method and having six square inches or more of facial area.

PENCIL ROD: A reinforcing steel rod with a diameter of 1/2-inch used in mortar and stone work.

PINHOLES: Imperfections in the surface of a ceramic body or glaze, or in the surface of a grout.

PLASTIC METHOD: See Extruded Tile.

PORCELAIN TILE: A ceramic mosaic tile or a paver tile that is generally made by the dust-pressed method from a composition which results in a tile that is dense, impervious, fine grained and smooth, with a sharply formed face.

POST-TENSION CONCRETE: A method of pre-stressing reinforced concrete in which tendons are tensioned after the concrete has hardened.

POT LIFE: The period of time a material maintains its workable properties after it has been mixed.

PRECAST CONCRETE: A structural concrete member that is cast and fitted in its final position.

QUARRY TILE: Glazed or unglazed tile made by the extrusion process from natural clay or shale, usually having six square inches or more of facial area.

RACK: A metal grid that is used for spacing ceramic floor tiles.

RED BODY TILE: Tile made from red-colored raw materials. The tile is coated with an opaque layer to conceal its natural coloration before glazes are applied.

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RUBBING STONE: An abrasive stone type too used to smooth the edges of ceramic tile.

SALTILLO TILE: Adobe type tile made of clay and other natural raw materials, molded and allowed to dry. Not a fired clay product.

SAMPLING: Method of obtaining tile for testing from an agreed upon lot.

SCULPTURED TILE: Tile with a decorative design of high and low areas molded into its face.

SCRATCH COAT: The first coat applied to reinforcing wire in a two coat mortar wall. It is usually cross-raked or scratched to form a mechanical key with the final coat.

SEALANT: An elastomeric material used to fill and seal expansion and control joints. This material prevents the passage of moisture and allows the horizontal and lateral movement at the expansion and control joints.

SEMI-VITREOUS TILE: Tile with water absorption of more than 3.0 percent, but not more than 7 percent.

SHEAR BOND: The force it takes to shear a tile from a substrate.

SLIP-RESISTANT TILE: Tile having slip-resistant characteristics due to an abrasive admixture, abrasive particles in the surface or grooves or patterns in the surface.

SLIP SHEET: A sheet that allows for independent movement of a mortar bed.

SPACERS: Plastic, rubber, wood or rope used in wall or floor installations to separate tiles. Manufactured spacers are available in thicknesses 1/16-inch to 1/2-inch.

SPECIAL PURPOSE TILE: Tile, either glazed or unglazed, made to meet or have special physical design or appearance characteristics such as size, thickness, shape, color or decoration; keys or lugs on back or sides; pre-grouted assemblies or sheets; special resistance to staining, frost alkalis, acids, thermal shock, physical impact or high coefficient of friction.

STANDARDS FOR CERAMIC TILES: Grading procedures for the dimensional, structural, and chemical characteristics of ceramic tile. In the United States, standards are established by ANSI (American National Standards Institute). In Europe, the CEN (Comité Européen de Normalisation) standards are used. ISO (International Standard Organization) standards have now been approved by member organizations to unify standards worldwide.

STRAIGHT JOINT: The usual style of laying tile where all the joints are in alignment.

SUBSTRATE: The underlying support for ceramic tile installations.

TERRACOTTA: Hard baked tile of variable color and water absorption. Usually unglazed, this product requires a sealer to prevent staining. Used mainly on interior floors. Sometimes referred to as Cotto.

THERMAL EXPANSION: The amount of linear expansion in a ceramic tile under heat.

THICK-BED MORTAR: A thick layer of mortar (more than 1/2 inch) that is used for leveling.

THIN-SET: The term used to describe the installation of tile with all materials except Portland cement mortar, which is the only recognized thick-bed method.

TILE: A ceramic surfacing unit, usually relatively thin in relation to facial area, made from clay or a mixture or a mixture of clay and other ceramic materials called the body of the tile, and having either a glazed or unglazed face. Fired at a temperature sufficiently high enough to produce specific physical properties and characteristics.

TRIM UNITS: Units of various shapes consisting of items such as bases, caps, corners, mouldings and angles necessary to achieve installations of the desired sanitary and architectural design.

UNGLAZED TILE: A hard, dense tile of uniform composition throughout, deriving color and texture from the materials of which the body is made.

VERTICAL BROKEN JOINT: Style of laying tile with each vertical row of tile offset for one-half its length.

VITREOUS TILE: Tile with water absorption of more than 0.5 percent, but not more than 3 percent.

WALL TILE: A glazed tile with a body that is suitable for interior use and which is usually non-vitreous, and is not required nor expected to withstand excessive impact or be subjected to freezing and thawing conditions.

WHITE-BODY EARTHENWARE TILES: Tiles composed of raw materials producing a white tile body that can be coated with a transparent glaze and takes color easily. Normally used for wall tiles.

Definitions were compiled with the help of a variety of sources, including the Ceramic Tile Institute of America, Ceramic Tiles of Italy, the Chicago Tile Institute, Laticrete International, the National Tile Contractors Association, Tile of Spain, Ceramic Tile Education Foundation and the Tile Council of America.