

GLOSSARY

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TILE GLOSSARY

Abrams law

A rule stating that with given concrete materials and conditions of test the ratio of the amount of water to the amount of the cement in the mixture determines the strength of the concrete, provided the mixture is of a workable consistency. (See also Water cement ratio).

Abrasion

Wearing away by friction.

Abrasion resistance

Ability of a surface to resist being worn away by rubbing and friction.

Absorbed moisture

Moisture that has entered a solid material by absorption and has physical properties not substantially different from ordinary water at the same temperature and pressure. (See also Absorption.)

Absorption

The relationship of the weight of the water absorbed by a ceramic specimen subjected to prescribed immersion procedure, to the weight of the dry specimen, expressed in percent. (ASTM C 242).

Accelerator

A substance which, when added to concrete, mortar, or grout, increases the rate of hydration of the hydraulic cement, shortens the time of setting, or increases the rate of hardening of strength development, or both.

Accessories (Tile Accessories)

Ceramic or non-ceramic articles, affixed to or inserted in tile work, as exemplified by towel bars, paper, soap and tumbler holders, grab bars and the like.

Acid

A chemical substance usually corrosive to common metals (iron, aluminum, zinc) and which, in water solution, imparts an acid, sour or tart taste. Acids are generally divided into two classes: (a) strong mineral or inorganic acids such as sulfamic, sulfuric, phosphoric, hydrochloric or nitric, (b) weak organic or natural acids such as acetic (vinegar), citric (citrus fruit juices), oxalic, and fatty acids (oleic, palmitic, stearic, etc.)

Acid and alkali-resistant grout

A grout that resists - Acidity. Effect of prolonged contact with acids and alkalis.

Acidity

A general term applying to substances on the acid side of neutral - principally the degree of acidity.

Acrylic

A general class of resinous polymers derived from esters, amides or other acrylic acid derivatives.

Additive

A term frequently (but improperly) used as a synonym for addition or admixture.

Adhesion

The state in which two surfaces are held together by interfacial forces which may consist of valence forces or interlocking action, or both. (See also Adhesion, mechanical and Adhesion, specific.)

Adhesion mechanical

Adhesion between surfaces in which the adhesive holds the parts together by interlocking action. (See also Adhesion, specific.)

Adhesion, specific

Adhesion between surfaces which are held together by valence forces of the same type as those which give rise to cohesion. (See also Adhesion, mechanical.)

Adhesive

A substance capable of holding materials together by surface attachment. Note: Adhesive is the general term and includes among other cement, glue, mucilage and paste. All of these terms are loosely used interchangeably. Various descriptive adjectives are applied to the term adhesive to indicate certain characteristics as follows: (a) Physical form, that is liquid adhesive, tape adhesive, (b) Chemical type, that is, silicate adhesive, resin adhesive, (c) Materials bonded, that is, paper adhesive, metal-plastic adhesive, can label adhesive, (d) Conditions of use, that is, hot-setting adhesive.

Adhesive, ceramic

Used for bonding tile to a surface. Rubber solvents; and rubber and resin-based emulsions can be used as adhesives.

Adhesive, tile

Organic adhesive used for bonding tile to a surface. Rubber solvents and resin-based and rubber emulsions can be used as adhesives.

Adhesive, pressure-sensitive

An adhesive made so as to adhere to a surface at room temperature by briefly applied pressure alone.

Adhesive, solvent

An adhesive having a volatile organic liquid as a vehicle. Note: This term excludes water based adhesives.

Admixture

A material other than water, aggregates, and hydraulic cement, used as an ingredient of concrete or mortar, and added to the concrete immediately before or during its mixing.

Adobe

Unburnt brick dried in the sun.

Aggregate

Granular material, such as sand, gravel, crushed stone, and iron blast-furnace slag, used with a cementing medium to form a hydraulic-cement, concrete or mortar. (See also Aggregate, heavyweight and Aggregate, lightweight.)

Aggregate, heavyweight

Aggregate, of high specific gravity such as barite, magnetite, limonite, ilmenite, iron or steel used to produce heavy concrete.

Aggregate, lightweight

Aggregate, of low specific gravity, such as expanded or sintered clay, shale, slate, diatomaceous shale, perlite, vermiculite, or slag; natural pumice, scoria, volcanic cinders, tuff, and diatomite; sintered fly ash or industrial cinders; used to produce lightweight concrete.

Air, entrained

See Entrained air.

Air-entraining

The capability of a material or process to develop a system of minute bubbles of air in cement, mortar, or concrete during mixing.

Air-slack

A condition where soft-body clay, after absorbing moisture and being exposed to the atmosphere, will spall a piece of clay and/or glaze.

Alkali

A chemical substance which effectively neutralizes acid material so as to form neutral salts. A base. The opposite of acid. Examples are ammonia and caustic soda.

Alumina porcelain

A vitreous ceramic whiteware for technical application in which alumina (A1203) is the essential crystalline phase. (ASTM C 242).

Alumina whiteware

Any ceramic whiteware in which alumina (A1203) is the essential crystalline phase. (ASTM C 242).

Andalusite

A polymorph, along with sillimanite and kyanite, of composition A1203 Si02. On firing, it dissociates to yield principally mullite. (ASTM C 21)

Anglar

Masonry composed of squared stones; one patem of masonry construction.

Angle curing

Steam curing of concrete products, sand-lime brick, asbestos-cement products, hydrous calcium silicate insulation products, or cement in an autoclave at maximum ambient temperatures generally between 340-420 F (176-215 C).

Angle divider

The angle divider is used by the tile setter to determine the degree of an angle to cut. It is used for fitting trim, moldings, and floors into corners. A corner angle is measured by adjusting the divider to fit the corner.

ANSI

American National Standards Institute

Anti Fracture Membrane

See Crack isolation.

APA

The Engineered Wood Association

Apron

Trim or facing on the side or in front of a countertop, table edge or windowsill.

ASTM

American Society for Testing and Materials

Autoclave

A pressure vessel in which an environment of steam at high pressure may be produced; used in the curing of concrete products and in the testing of hydraulic cement.

Back-Butter

The spreading of a bond coat to the Backs of ceramic tile just before the tile is placed.

Back wall

The wall facing an observer who is standing at the entrance to a room, shower, or tub shower.

Backing

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

Backing off

See Feather edging tile. Angle tile.

Balanced cuts

Cuts of tile at the perimeter of an area that will not take full tiles. The cuts on opposite sides of such an area shall be the same size. The same sized cuts will be placed on each side of a miter.

Ball clay

A secondary clay, commonly characterized by the presence of organic matter, high plasticity, high dry strength, long vitrification range, and a light color when fired. (ASTM C 242).

Ball milling

A method of grinding and mixture material, with or without liquid, in a rotating cylinder or conical mill partially filled with grinding media such as balls or pebbles. (ASTM C 242).

Bar support

A rigid device used to support or hold reinforcing bars in proper position to prevent displacement before or during concrete placement.

Basalt ware

A black unglazed vitreous ceramic ware having the appearance of basalt rock. (ASTM C 242).

Base

One or more rows of tile installed on a vertical surface above the floor. See Cove.

Basis for acceptance

The method of determining whether a lot of ceramic tile is acceptable under these specifications.

Batch mixer

A machine which mixes batches of concrete or mortar in contrast to a continuous mixer.

Batch plant

An operating installation of equipment including batchers and mixers as required for batching or for batching and mixing concrete materials; also called mixing plant when equipment is included.

Beating block

A wooden block used to embed tiles in a flat plane. The method used is called beating in.

Belleek china

A highly translucent whiteware composed of a body containing a significant amount of frit and normally having a luster glaze. (Produced commercially at Belleek, Ireland.) (ASTM C 242).

Bench mark

Permanent reference point or mark.

Bentonite

A clay composed principally of minerals of the montmorillonoid group, characterized by high absorption and very large volume change with wetting or drying. Beryllium oxide (berylla) (BeO) An inorganic material of exceptionally high thermal conductivity which is toxic in the powder form.

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.

Biscuit chips

Glazed-over chips on the edge or corner of the body of a tile.

Biscuit cracks

Any fractures in the body of a tile visible both on face and back.

Bisque fire

See Fire, bisque.

Blaine fineness

The fineness of powdered materials such as cement and pozzolans, expressed as surface area usually in square centimeters per gram, determined by the Blaine apparatus.

Bleb

A small blister or bubble.

Bleeding

The autogenous flow of mixing water within, or its emergence from newly placed concrete or mortar; caused by the settlement of the solid materials within the mass; also called water gain.

Blend

To mix or make homogeneous.

Blistering

The development during firing of enclosed or broken macroscopic vesicles or bubbles in a body, or in a glaze or other coating. (ASTM C 242).

Block angle

A square of tile specially made for changing direction of the trim such as butterfly or down angle.

Bloom

A visible exudation or efflorescence on the surface.

Blots

Marks or stains on the face of a tile.

Blunging

The wet process of blending, or suspending ceramic material in liquid by agitation. (ASTM C 242). The structural portion of a ceramic article. This term also refers to the material or mixture from which the article is made. (ASTM C 242).

Body

The structural portion of a ceramic tile. This term also refers to the material or mixture from which the tile is made.

Bond

The adherence of one material to another.

Bond breaker

Any material preventing adhesion.

Bond coat

A material used between the back of the tile and the prepared surface. Suitable bond coats include pure Portland cement, Dry-Set Portland cement mortar, latex-type Portland cement mortar, organic adhesive, and the like.

Bond Strength

A bond coat's ability to resist separating from the tile and setting bed. Measured in pounds per square inch (psi).

Bonding agent

A substance applied to a substrate to create a bond between it and a succeeding layer. Such as between a subsurface and a terrazzo topping or a succeeding plaster application.

Bone ash

Calcined bone consisting essentially of calcium phosphate. (ASTM C 242).

Bone china

A translucent china made from a ceramic whiteware body composition containing a minimum of 25 percent bone ash. (ASTM C 242).

Box Screed

Essentially a box screed is a jig used to apply mortar onto the back side of large-sized ceramic, marble and granite tiles which may vary in thickness, in order to achieve a uniform unit of thickness of the tile and mortar combined.

Brick trowel

The brick trowel is larger than the buttering trowel. The most popular size used by tile setters is 5" wide and 11" long. It is used when any preparatory brick work has to be done. Some tile setters use it for quarry and terra cotta tile work. Its greater surface and weight are advantageous in the buttering and tapping in of the larger tiles.

Brick Veneer Tile

Tile produced by several methods to simulate the appearance of brick.

Bridge

A straightedge used as a starting line for the laying of tile. The straightedge can be blocked up to support tile over an opening.

Bridge deck

The slab or other structure forming the travel surface of a bridge.

Bright glaze

Colorless or colored ceramic glaze having high gloss. (ASTM C 242).

Broom finish

The surface texture obtained by stroking a broom over freshly placed concrete. (See also Brushed surface.)

Brown coat

The second coat in three-coat plaster application.

Brushed surface

A sandy texture obtained by brushing the surface of freshly placed or slightly hardened concrete with a stiff brush for architectural effect or, in pavements, to increase skid resistance. (See also Broom finish.)

Building official

The official charged with administration and enforcement of the applicable building code or his duly authorized representative.

Bulking

Increase in the bulk volume of a quantity of sand in a moist or wet condition over the volume of the same quantity of dry sand.

Bulking curve

Graph of change in volume of a quantity of sand due to change in moisture content.

Bulking factor

Ratio of the volume of moist sand to the volume of the sand when dry.

Bull float

A tool comprising a large, flat, rectangular piece of wood, aluminum, or magnesium usually 8 in. (20 cm) wide and 42 to 60 in. (100 to 150 cm) long, and a handle 4 to 16 ft. (1 to 5 cm) in length used to smooth unformed surfaces of freshly placed concrete.

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.

Bullnose corner

A type of bullnose trim with a convex radius on two adjacent edges.

Burlap

A coarse fabric of jute, hemp, or less commonly, flax, for use as a water-retaining covering in curing concrete surfaces; also called Hessian.

Bushhammer

A hammer that has a rectangular head with serrated or jagged faces. The bushhammer is used for roughing concrete to provide a bond for masonry.

Butterfly

A slang term for corner angles for trim shapes such as AB 106, AF 105, AF 200, AK106, and AU 106.

Butt joint

A plain square joint between two members.

Butterfly

A term commonly used for inside corner angles for trim shapes such as AB 106, AF 105, AF 200, AK 106, and AU 106.

Buttering

The spreading of a bond coat (followed by a mortar coat, a thin-setting bed mortar, or an organic adhesive) to the backs of ceramic tile just before the tile is placed.

Buttonback Tile

Tile that have projections on the bondable side. Many of these projections are round and therefore the term buttonback. Some projections are quite thick and can also be other shapes, such as square.

Calcine

A ceramic mineral or mixture fired to less than fusion for use as a constituent in a ceramic composition. (ASTM C 242).

Camber

A deflection that is intentionally built into a structural element or form to improve appearance or to nullify the deflection of the element under the effects of loads, shrinkage and creep.

Cap

See Bullnose.

Cassiterite (Sri 02)

An inorganic mineral of the tetragonal form used as a source of tin and tin oxide. (ASTM C 21)

Cast-in-place

Mortar or concrete which is deposited in the place where it is required to harden as part of the structure, as opposed to precast concrete.

Casting

Forming ceramic ware by introducing a body slip into a porous mold which absorbs sufficient water from the slip to produce a semi rigid article. (ASTM C 242).

Casting plaster

A fast-setting gypsum plaster that is used to anchor marble to walls, set spots, or mix temporary "hot mud."

Casting solid

Forming ceramic ware by introducing a body slip into a porous mold which usually consists of two major sections, one section forming the contour of the inside of the ware and allowing a solid cast to form between the two mold faces. (ASTM C 242).

Casting, drain (hollow casting)

Forming ceramic ware by introducing a body slip into an open porous mold, and then draining off the remaining slip when the cast has reached the desired thickness. (ASTM C 242).

Caulk

See Sealant.

Caulking compound

A soft, plastic material consisting of pigment and vehicle, used for sealing joints in buildings and other structures where normal structural movement may occur. Caulking compound retains its plasticity for an extended period after application. It is available in forms suitable for application by gun and knife and in extruded preformed shapes.

Ceiling mortar

Extra-rich wall mortar.

Cement

Usually refers to Portland cement which when mixed with sand, gravel, and water forms concrete. Generally, cement is an adhesive; specifically, it is that type of adhesive which sets by virtue of a chemical reaction.

Cement grout

A cementitious mixture of Portland cement, sand or other ingredients and water which produces a water resistant, uniformly colored material used to fill joints between tile units.

Cement mortar

A cementitious mixture of Portland cement, sand or other ingredients and water which is used for bonding tile to back-up material.

Cement Portland

A hydraulic cement produced by pulverizing clinker consisting essentially of hydraulic calcium silicates, and usually containing one or more of the forms of calcium sulfate as an interground addition.

Cement, white

Portland cement which hydrates to a white paste; made from raw materials of low iron content, the clinker for which is fired by a reducing flame.

Cement, masonry

A hydraulic cement for use in mortars for masonry construction, containing one or more of the following materials: portland cement, portland blast-furnace slag cement, portland-pozzolan cement, natural cement, slag cement or hydraulic lime; and in addition usually containing one or more materials such as hydrated lime, limestone, chalk, calcareous shell, talc, slag, or clay, as prepared for this purpose.

Cement-body tiles

Tiles with the body made from a mixture of sand and portland cement. The surface may be finished with portland cement, spheroids of marble or other materials.

Cementitious

Having the properties of cement.

Centigrade

A scale of temperature which features 0°C and 100°C as the freezing and boiling point of water respectively. To convert centigrade to Fahrenheit multiply by 1.8 and add 32, e.g., (100°Cx1.8)+ 32=212°F.

Ceramic article

An article having a glazed or unglazed body of crystalline or partly crystalline structure, or of glass, which body is produced from essentially inorganic, nonmetallic substances and either is formed from a molten mass which solidifies on cooling or is formed and simultaneously or subsequently matured by the action of the heat. (ASTM C 242).

Ceramic mosaic tile

An unglazed tile formed by either the dust-pressed or plastic method, usually 1/4 to 3/8 in. (6.4 to 9.5 mm) thick, and having a facial area of less than 6 in. 2 and which is usually mounted on sheets approximately 2 by 1 ft. (0.3 by 0.6 m) to facilitate setting. Ceramic mosaic tile may be of either porcelain or natural clay composition and may be either plain or with an abrasive mixture throughout. (ASTM C 242). Ceramic paste. A French term synonymous with "ceramic body." (ASTM C 242).

Ceramic process

The production of articles or coatings from essentially inorganic, nonmetallic materials, the article or coating being made permanent and suitable for utilitarian and decorative purposes by the action of heat at temperatures sufficient to cause sintering, solid-state reactions, bonding, or conversion partially or wholly to the glassy state. (ASTM C 242).

Ceramic tile

A ceramic surfacing unit, usually relatively thin in relation to facial area, made from clay or a mixture of clay; and other ceramic material, called the body of the tile, having either a "glazed" or "unglazed" face, and fired above red heat in the course of manufacture to a temperature sufficiently high to produce specific physical properties and characteristics.

Ceramic whiteware

A fired ware consisting of a glazed or unglazed ceramic body which is commonly white and of fine texture. This term designates such products as china, porcelain, semi vitreous ware and earthenware. (ASTM C 242).

Ceramics

A general term applied to the art or technique of producing articles by a ceramic process, or to the articles so producing. (ASTM C 242).

Chair

See Bar support.

Chalk line

Usually cotton cord coated with chalk. The cord is snapped to mark a straight line. The chalk line is used to align spots or screeds.

Checking

Short shallow cracks on the surface. Chemical porcelain. Vitreous ceramic whitewares used for containing, transporting, or reacting of chemicals. (ASTM C 242).

China

A glazed or unglazed vitreous ceramic whiteware used for nontechnical purposes. This term designates such products as dinnerware, sanitary ware, and art ware when they are vitreous. (See also Bone china.) (ASTM C 242).

China process

The method of producing glazed ware by which the ceramic body is fired to maturity, following which the glaze is applied and matured by firing at a lower temperature. (ASTM C 242).

China sanitary ware (sanitary plumbing fixtures)

Glazed, vitrified whiteware fixtures having a sanitary service function. (ASTM C 242).

Chipped

Caused from the same reasons as given under "pitted" or by rough handling and confined to the corners and edges of the tile.

Chipping hammer

The chipping hammer is a lightweight hammer that comes in a variety of sizes. The head and back can be capped with tungsten carbide for durability. It is used by the tile setter to chip excess material from the backs and edges of wall and quarry tiles, thus reducing the amount of grinding work necessary to smooth a cut.

Chips

The scaling or breaking off at the edges of fragments from the surface of a tile, as might result from rough handling.

Clay

A natural mineral aggregate, consisting essentially of hydrous aluminum silicates; it is plastic when sufficiently wetted, rigid when dried en masse, and vitrified when fired to a sufficiently high temperature. (ASTM C 242).

Clear glaze

A colorless or colored transparent ceramic glaze. (ASTM C 242).

Cleavage membrane

A layer of 15 lb. roofing felt, or an equivalent type of construction paper or polyethylene sheeting, used to isolate a wire reinforced mortar bed for tile from the concrete substrate. (CTI)

Cold joint

Any point in a tile installation where tile and setting bed have terminated and the surface has lost its plasticity before work is continued.

Cold joint lines

Visible lines on the surfaces of formed concrete indicating the presence of joints where one layer of concrete had hardened before subsequent concrete was placed. (See also Cold joint).

Color

The aspect of the appearance of an object dependent upon the spectral composition of the incident light, the spectral reflectance of transmittance of the object, and the spectral response of the observer.

Colored grout

Commercially prepared grout consisting of carefully graded aggregate, portland cement, water dispersing agents, plasticizers and color fast pigments. (CTI).

Column

A member used primarily to support axial compression loads and with a height of at least three times its least lateral dimension.

Compaction

The process whereby the volume of freshly placed mortar or concrete is reduced to the minimum practical space usually by vibration, centrifugation, tamping, or some combination of these; to mold it within forms or molds and around embedded parts and reinforcement, and to eliminate voids other than entrained air.

Composition tile

A hard tile surfacing unit made from a mixture of chemicals. The finished surface can be the mixture of chemicals or can be marble chips to create a terrazzo finish. The unit is made hard by the set of the chemicals and the product is not fired as in the manufacture of ceramic tile. (CTI)

Compressive strength

The measured maximum resistance of a concrete or mortar specimen to axial loading; expressed as force per unit cross-sectional area; or the specified resistance used in design calculations, in the U.S. customary units of measure expressed in pounds per square inch (psi).

Concrete

A composite material which consists essentially of a binding medium within which are embedded particles or fragments of aggregate; in portland cement concrete, the binder is a mixture of portland cement and water.

Concrete pump

An apparatus which forces concrete to the placing position through a pipeline or hose. Concrete, prestressed. See Prestressed concrete. Concrete, pumped. See Pumped concrete.

Concrete, fibrous

Concrete containing, dispersed, randomly oriented fibers.

Concrete, field

Concrete delivered or mixed, placed, and cured on the job site.

Concrete, foamed

Concrete made very light and cellular by the addition of a prepared foam or by generation of gas within the unhardened mixture.

Concrete, green

Concrete which has set but not appreciably hardened.

Concrete, lightweight

Concrete using lightweight aggregates or combination of lightweight and normal-weight aggregates. Structural lightweight concrete air-dry density ranges from 85 to 115 PCF and compressive strength is in excess of 2500 PSI.

Concrete, precast

See Precast concrete.

Concrete, refractory

See Refractory concrete.

Concrete, terrazzo

Marble-aggregate concrete that is cast-in-place precast and ground smooth for decorative surfacing purposes on floors and walls.

Condensation

Usually refers to liquid drops which form when a vapor is chilled below its boiling point. Also refers to water droplets that deposit on surfaces whose temperature is below the dew point. Conductive (adj.) Having the quality or power of conducting or transmitting heat, electricity, or static electricity.

Conductive mortar

A tile mortar to which specific electrical conductivity is imparted through the use of conductive additives.

Conductive tile

Tile made from special body compositions or by methods that result in specific properties of electrical conductivity while retaining other normal physical properties of ceramic tile.

Contaminated

Stained tile as a result of carton and tile being saturated by moisture, oils, solvents or other materials.

Contraction joint

Formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location or cracking resulting from the dimensional change of different parts of the structure. (See also Isolation joint.)

Control joints

See Contraction joint. (TCNA Handbook)

Conventional installation

The method of installing ceramic tile with portland cement mortar.

Coping

The material or units used to form a cap or finish on top of a wall, pier, pilaster, or chimney.

Corbel

A projection from the face of a beam, girder, column, or wall used as a beam seat or a decoration.

Cordierite porcelain

A vitreous ceramic whiteware for technical application in which cordierite is the essential crystalline phase. (ASTM C 242).

Cordierite whiteware

A ceramic whiteware in which cordierite is the essential crystalline phase. (ASTM C 242).

Corrosion

The eating and wearing away by chemical action (pitting, rusting).

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.

Cove base (sanitary)

A trim tile having a concave radius on one edge and a convex radius with a flat landing on the opposite edge. This base often is used as the only course of tile above the floor tile.

Coverage

A measure of the amount of material required to cover a given surface.

Covering power

The ability of a glaze to uniformly and completely cover the surface of the fired water. (ASTM C 242).

Crack-control reinforcement

Reinforcement in concrete construction designed to prevent opening of cracks, often effective in limiting them to uniformly distributed small cracks.

Cracked

Tiles that have actually been cracked in one or more pieces usually during the beating in process of installation. These will show up as hairline cracks.

Crack Isolation

Prevention of transfer of cracks from the substrate through the tile or stone when substrate is subjected to horizontal movement of cracks.

Cracks

Hair-line fissures.

Crawling

A parting and contraction of the glaze on the surface of ceramic ware during drying or firing, resulting in unglazed areas bordered by coalesced glaze. (ASTM C 242-58T)

Crazing

The cracking which occurs in fired glazes or other ceramic coatings due to critical tensile stresses. (ASTM C 242).

Creep

Tune-dependent deformation due to sustained load.

Crooked edges

A curvature of the sides, either convex or concave, measured along the sides. The degree of crook is the departure from the straight line between two corners, expressed in percentage of the tile length.

Crow hop

A slang term used to describe tile joints that are out of alignment.

Crystalline glaze

Glazed tile with an extra heavy glaze produced for use on counter tops and light duty floor surfaces where abrasion or impact is not excessive. (CTI)

CSI

Construction Specification Institute

CTDA

Ceramic Tile Distributors Association

CTEF

Ceramic Tile Education Foundation

CTI

Ceramic Tile Institute

CTIOA

Ceramic Tile Institute of America

Curing

Maintenance of humidity and temperature of freshly placed concrete during some definite period following placing, casting, or finishing to assure satisfactory hydration of the cementitious materials and proper hardening of the concrete.

Curing blanket

A built-up covering of sacks, matting, hessian, straw, waterproof paper, or other suitable material placed over freshly finished concrete. (See also Burlap.)

Curing compound

A liquid that can be applied as a coating to the surface of newly placed concrete to retard the loss of water or, in the case of pigmented compounds, also to reflect heat so as to provide an opportunity for the concrete to develop its properties in a favorable temperature and moisture environment. (See also Curing.)

Curing, electrical

A system in which a favorable temperature is maintained in freshly-placed concrete by supplying heat generated by electrical resistance. Curing, steam. See Steam curing.

Curling

The distortion of an originally essentially linear or planar member into a curved shape such as the warping of a slab due to creep or to differences in temperature or moisture content in the zones adjacent to its opposite faces.

Cushion-edged tile

Tile on which the facial edges have a distinct curvature that result in a slightly recessed joint.

D-cracking

The progressive formation on a concrete surface of a series of fine cracks at rather close intervals, often of random patterns. Evidenced in slabs on grade by cracks paralleling edges or joints and curving across slab corners. (Also termed D-cracks and D-line cracks.)

D-load

A constant load that in structures is due to the mass of the members, the supported structure, and permanent attachments or accessories.

Dago float

A slang term used to describe the use of a fresh mortar screed in lieu of float strips to rod floor mortar. This method is commonly used in floor work. Terrazzo workers use this technique to align "concrete" for placement of brass or aluminum strips to the desired grade.

Dago stick

A slang term used by tile setters when referring to a small piece of wood used to rod off mortar that has been applied to fill the holes caused by the removal of float strips.

Darby

A hand-manipulated straightedge, usually 3 to 5 ft. (1 to 2.5) long, used in the early stage leveling operations of concrete or plaster, preceding supplemental floating and finishing.

Dash-bond coat

A thick slurry of portland cement, Sand and water flicked on surfaces with a paddle or brush to provide a base for subsequent portland cement plaster coats; sometimes used as a final finish on plaster.

Deck

The form on which concrete for a slab is placed, also the floor or roof slab itself. (See also Bridge deck.)

Deck or floor mortar

Mortar commonly used for decks or floors. It consists of sand and regular portland cement mixed with water to a firm consistency.

Decorated

Adorned, embellished, or made more attractive by means of color or surface detail. (ASTM C 242).

Decorating fire

See Fire, decorating.

Decoration

See Decoration, inglaze; Decoration, overglaze; Decoration, underglaze.

Decoration, inglaze

A ceramic decoration applied on the surface of an unfired glaze and matured with the glaze. (ASTM C 242).

Decoration, overglaze

A ceramic or metallic decoration applied and fired on the previously glazed surface of ceramic ware. (ASTM C 242).

Decoration, underglaze

A ceramic decoration applied directly on the surface of ceramic ware and subsequently covered with a transparent glaze. (ASTM C 242).

Decorative tile

Tile with a ceramic decoration on the surface. (See heading under Decorated and Decoration.)

Deflection

A variation in position or shape of a structure or structural element due to effects of load or volume change, usually measured as a linear deviation from an established plane rather than an angular variation.

Deformation eutectic

See Eutectic, deformation.

Delft ware

A calcareous earthenware having an opaque white glaze and monochrome overglaze decorations. (Originated in Delft, Holland.) (ASTM C 242).

Discoloration

Departure of color from that which is normal or desired.

Divider strips

In terrazzo work, nonferrous metal or plastic strips of different thickness, and embedded depths usually 5/8 to 1/4 in. (10 to 40 mm), used to form panels in the topping.

Dolomite

The double carbonate of lime and magnesia having the general formula $\text{CaCO}_3 \text{ MgCO}_3$. (ASTM C 242).

Dope coat

Neat cement applied to the setting bed.

Double Bullnose

A type of trim with the same convex radius on two opposite sides.

Dowel

A steel pin, commonly a plain round steel bar, which extends into two adjoining portions of a concrete construction, as at a joint in a pavement slab, so as to connect the portions and transfer shear loads. Also, as used in the construction of column and wall sections, a deformed steel reinforcing bar placed so as to transmit tension or compression as well as shear loads.

Down Angle

Trim tile with two rounded or curved edges, which serves to finish an outside corner.

Drain casting

See Casting, drain.

Dry edging

Rough edges and corners of glazed ceramic ware due to insufficient glaze coating. (ASTM C 242). Dry mix. See Process, dry.

Dry pack

Concrete or mortar mixtures deposited and consolidated by dry packing.

Dry packing

Placing of zero slump, or near zero slump, concrete, mortar, or grout by ramming into a confined space.

Dry pressing

See Pressing, dry.

Dry process

See Process, dry.

Dry spots

Small areas on the face of tile which have been insufficiently glazed.

Dry-set mortar

A water-retentive hydraulic cement mortar usable with or without sand. When this mortar is used, neither the tile nor walls have to be soaked during the installation process.

Drying

Removal by evaporation, of uncombined water or other volatile substance from a ceramic raw material or product, usually expedited by low temperature heating. (ASTM C 242).

Dunting

The cracking that occurs in fired ceramic bodies due to thermally induced stresses. (ASTM C 242-72)

Dusting

The application of dry portland cement to a wet floor or deck mortar surface. A pure coat is thus formed by suction of the dry cement.

Dutchman

A cut tile used as a filler in the run of a wall or floor area.

Eagle beak

A 6"x3/4" outside corner trim shape. (AC 106) Earthenware. A glazed or unglazed nonvitreous ceramic whiteware. (ASTM C 242).

Edge-mounted tile

A type of mounted tile. Tile is assembled into units or sheets and is bonded at the edges or corners of the back of the tiles by an elastomeric or resinous material which becomes an integral part of the tile installation. Units or sheets must meet criteria of back-mounted sheets. See definition for Mounted tile.

Edge-bonded tile

See definition for PregROUTED tile.

Edger

A finishing tool used on the edges of fresh concrete to provide a rounded corner.

Efflorescence

The residue deposited on the surface of a material by the crystallization of soluble salts.

Egg shelling

The texture of a fired glaze similar in appearance to the surface of an eggshell. (ASTM C 242).

Electrical porcelain

Vitrified white ware having an electrical insulating function. (ASTM C 242).

Electrolysis

Production of chemical changes by the passage of current through an electrolyte.

Elastomeric

A natural material, for example, rubber, or a synthetic material, for example, polyvinyl, that has elastic properties.

Embossed

A decoration in relief or excised on the ware surface. (ASTM C 242).

Engobe

A slip coating applied to a ceramic body for imparting color, opacity or other characteristics, and subsequently covered with a glaze. (ASTM C 242).

Entrained air

Microscopic air bubbles intentionally incorporated into mortar or concrete during mixing, usually by use of a surface-active agent. (See also Air entrainment.)

Epoxy adhesive

A two-part adhesive system employing epoxy resin and epoxy hardener used for bonding of ceramic tile to back-up materials.

Epoxy grout

A two-part grout system consisting of epoxy resin and epoxy hardener, especially formulated to have impervious qualities, stain, and chemical resistance used to fill joints between tile units.

Epoxy mortar

A two-part mortar system consisting of epoxy resin and epoxy hardener used to bond tile to back-up material where chemical resistance of high bond strength is a consideration.

Epoxy resin

An epoxy composition used as a chemical resistant setting adhesive or chemical-resistant grout.

Equilibrium eutectic

See Eutectic, equilibrium. Eutectic. See Eutectic, deformation; Eutectic, equilibrium.

Eutectic, deformation

The composition within a system of two or more components which, on heating under specific conditions, develops sufficient liquid to cause deformation at minimum temperature. (ASTM C 242). Eutectic equilibrium (eutectic). The composition within any system of two or more crystalline phases which melts completely at minimum temperature, or temperature at which such a composition melts. (ASTM C 242).

Expansion joint

A joint through tile, mortar, and reinforcing wire down to the substrate.

Exposed-aggregate finish

A decorative finish for concrete work achieved by removing, generally before the concrete has fully hardened, the outer skin of mortar and exposing the coarse aggregate.

Extra duty tile

See Special purpose tile.

Extruded tile

A tile or trim 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.

Face Mounted Tile

See mounted tile.

Facial defect

That portion of the facial surface of the tile which is readily observed to be nonconforming and which will detract from the aesthetic appearance or serviceability of the installed tile.

Faience mosaics

Faience that are less than 6 in in facial area, usually 5/16 to 3/8 in. (8 to 9.5 mm) thick, and usually mounted to facilitate installation. (ASTM C 242).

Faience tile

Glazed or unglazed tile, generally made by the plastic process, showing characteristic variations in the face, edges, and glaze that give a handcrafted, nonmechanical, decorative effect. (ASTM C 242).

Faience ware

Formerly decorated earthenware with an opaque glaze, but currently designating a decorated earthenware having a transparent glaze (ASTM C 242).

Fan or fanning

Spacing tile joints to widen certain areas so they will conform to a section that is not parallel.

Fascia

A flat member or band at the surface of a building or the edge beam of a bridge; exposed eave of a building; often inappropriately called fascia.

Feather edge

A wood or metal tool having a beveled edge; used to straighten re-entrant angles in finish plaster coat; also edge of a concrete or mortar placement such as a patch or topping that is beveled at an acute angle.

Featheredging file (mitering)

The method of chipping away the body from beneath a facial edge of a tile in order to form a miter.

Feature strip (decorated liner)

A narrow strip of tile that has a contrasting color, texture, or design.

Feldspar

A mineral aggregate consisting chiefly of microcline, albite and/or anorthite. (ASTM C 242)

Fiberglass

The name for products made of or with glass fibers ranging from 5 to 600 hundred-thousandths inch in diameter. Used for making textile fabrics and for heat or sound insulation.

Field tile

Tile other than trim tile covering a wall or floor.

Filler

See Spacing mix.

Final setting time

The time required for a freshly mixed cement paste, mortar or concrete to achieve final set.

Fire

See Fire, bisque; Fire, decorating; Fire, glost; Fire, single.

Fire clay

An earthy or stony mineral aggregate which has as the essential constituent hydrous silicates of aluminum with or without free silica, plastic when sufficiently pulverized and wetted, rigid when subsequently dried, and of suitable refractoriness for use in commercial refractory products.

Fineness modulus

A factor obtained by adding the total percentages by weight of an aggregate sample retained on each of a specified series of sieves, and dividing the sum by 100. In the United States the standard sieve sizes are No. 100 (150 μ m), No. 30 (600 μ m), No. 16 (1.18 mm), No. 8 (2.36 mm) and No. 4 (4.75 mm), and a/s in. (9.5 mm), 3/a in. (19 mm), 1 1/2 in. (38,1 mm), 3 in. (75 mm), and 6 in. (150 mm).

Fire, bisque

The process of kiln-firing ceramic ware prior to glazing. (ASTM C 242).

Fire, decorating

The process of firing ceramic or metallic decorations on the surface of glazed ceramic ware. (ASTM C 242).

Fire, glost

The process of kiln-firing bisque ware to which glaze has been applied. (ASTM C 242).

Fire, single

The process of maturing an unfired ceramic body and its glaze in one firing operation. (ASTM C 242).

Firing

The controlled heat treatment of ceramic ware in a kiln or furnace, during the process of manufacture, to develop the desired properties. (ASTM C. 242).

Firing range

The range of firing temperature within which a ceramic composition develops properties which render it commercially useful. (ASTM C 242).

Flaked

Irregularities left on the edge of the tile mainly due to the use of machine cutting tools.

Flammable

Capable of being easily ignited.

Flash point

The temperature at which the material gives off flammable vapor in sufficient quantity to ignite momentarily on the application of a flame under specified conditions.

Flexural strength

A property of a material or structural member that indicates its ability to resist failure in bending. (See also Modulus of rupture.)

Float coat

The final mortar coat over which the neat coat, pure coat, or skim coat is applied.

Float strip

A strip of wood about 1/4" thick and 1 1/2" wide. It is used as a guide to align mortar surfaces.

Floating

A method of using a straightedge to align mortar with the float strips or screeds. This technique also is called dragging, pulling, rodding, or rodding off.

Fluorite (Ca F₂) (fluorspar)

An inorganic mineral of the isometric form, used as a source of fluorine for fluxing of glasses and glazes.

Flux

A substance that promotes fusion in a given ceramic mixture. (ASTM C 242).

Fog curing

1. Storage of concrete in a moist room in which the desired high humidity is achieved by the atomization of fresh water. (See also Moist room).
2. Application of atomized fresh water to concrete, stucco, mortar, or plaster.

Form oil

Oil applied to interior surface of formwork to promote easy release from the concrete when forms are removed.

Forming

The shaping or molding of ceramic ware. (ASTM C 242).

Forsterite porcelain

A vitreous ceramic whiteware for technical application in which forsterite (2MgO SiO) is the essential crystalline phase. (ASTM C 242).

Forsterite whiteware

Any ceramic whiteware in which Forsterite (2MgO - SiO) is the essential crystalline phase. (ASTM C 242).

Freehand floating

The application of wall mortar without the use of guide screeds. This technique is used by specialists when they are setting glass mosaic murals.

Frit

A glass which contains fluxing material and is employed as a constituent in a glaze, body or other ceramic composition. (ASTM C 242).

Fritted glaze

A glaze in which a part or all of the fluxing constituents are prefused. (ASTM C 242).

Frost proof tile

Tile produced for use where freezing and thawing conditions occur. (CTI)

Furan mortar

A two-part mortar system of furan resin and furan hardener used for bonding tile to back-up material where chemical resistance of floors is important.

Furan Plastics

Plastics based on resins in which the furan ring is an integral part of the polymer chain, made by the polymerization -or polycondensation of furfural, furfuryl alcohol, or other compounds containing a furan ring, or by the reaction of these furan compounds with other compounds, the furan being in greater amount by weight.

Furan Grout

An intimate mixture of a furan resin, selected fillers and an acid catalyst. Fillers are generally carbon, silica or a combination thereof into which the acid catalyst, or setting agent, may be incorporated. When combined, the components form a flowable chemical resistant material for grouting tile.

Furan resin

A furan resin composition used as a chemical-resistant setting adhesive or chemical-resistant grout.

Furan resin grout

A two-part grout system of furan resin and furan hardener used for filling joints between quarry tile and pavers where chemical resistant properties are required.

Furring

Stripping used to build out a surface such as a studded wall where strips of suitable size are added to the studs to accommodate vent pipes or other fixtures.

Fusion

The process of melting; usually the result of interaction of two or more materials. (ASTM C 242).

Gilmore needle

A device used in determining time of setting of hydraulic cement.

Glass Mesh Mortar Unit/Cementitious Backer Unit

A backer board designed for use with ceramic tile in wet areas. It can be used in place of metal lath, portland cement scratch coat and mortar bed.

Glass mosaic tiles

Tiles made of glass, usually in sizes not over two (2) inches square and 1/4 inch thick, mounted on sheets of paper. Usually sheets are twelve (12) inches square.

Glaze

A ceramic coating matured to the glassy state on a formed ceramic article. The term glaze also refers to the material or mixture from which the coating is made. (ASTM C 242). Bright glaze. A high-gloss coating with or without color. (ASTM C 242). Clear glaze. A transparent glaze with or without color. (ASTM C 242). Crystalline glaze. A glaze that contains microscopic crystals. (ASTM C 242). Fritted glaze. A glaze in which a part or all of the fluxing constituents are prefused. (ASTM C 242). Matt glaze. A low-gloss ceramic glaze with or without color. (ASTM C 242). Opaque glaze. A nontransparent glaze with or without color. (ASTM C 242). Raw glaze. A glaze compounded primarily from raw constituents. It contains no prefused materials. (ASTM C 242). Semi matte glaze. A medium-gloss ceramic glaze with or without color. (ASTM C 242). Speckled glaze. A glaze containing granules of oxides or ceramic stains that are of contrasting colors.

Glaze fit

The stress relationship between the glaze and body of a fired ceramic product. (ASTM C 242).

Glazed interior tile

A glazed tile with a body that is suitable for interior use and which is usually nonvitreous, and is not required or expected to withstand excessive impact or be subject to freezing and thawing conditions. (ASTM C -242).

Glazed paver tile

See Pavers. Glazed quarry tile. See Quarry tile. Glazed tile. Tile with a fused impervious facial finish composed of ceramic materials, fused into the body of the tile which may be a nonvitreous, semi vitreous, vitreous, or impervious body. The glazed surface may be clear, white, or colored. (ASTM C 242). Glazed tile, extra duty glaze. Tile with a durable glaze that is suitable for light duty floors and all other surfaces on interiors where there is no excessive abrasion or impact. (ASTM C 242).

Glost fire

See Fire, glost.

Grade

A predetermined degree of slope for floors requiring drainage.

Grades

Grades of tile recognized in ANSI standard specifications for ceramic tile.

Grout

A rich or strong cementitious or chemically setting mix used for filling tile joints.

Grouting

The process of filling the tile joints with grout.

Grout saw

The grout saw is a saw-toothed carbide steel blade mounted on a wooden handle. It is used to remove old grout. It also is used in patching work. Care should be used as it can easily damage adjacent tiles. The carbide steel blade is brittle, and it will shatter if it is dropped or abused. On front of the saw blade is a spring steel tip, used for scraping grout out of corners where the saw blade cannot reach.

Grout scrubbing pad

A no scratch nylon pad impregnated with abrasive used for cleaning grout off tile. Hairline cracking.

Grout, colored

See Colored grout.

Half and half

See Spacing mix.

Hard screed

A mortar screed that has become firm.

Hard Tile

A term used in the tile trade to designate types of tile, such as ceramic, glass mosaic, marble tile, etc., over which the tile trade has jurisdiction. Hard tile as compared to resilient tile.

Hawk

Hawks range in size from 10" to 14" square, but tile setters generally prefer the 11" square. Most hawks are made of aluminum with a wooden handle at the center. A rubber pad fits over the handle and covers that portion of the metal hawk that would come in contact with the hand. The hawk should not be held with a hand that is wet or covered with lime or mortar.

Healing power

The ability of a glaze to heal surface blemishes during firing. (ASTM C 242).

Heavy duty tile

Tile suitable for areas where heavy pedestrian traffic is prevalent. Tile can be specified to meet higher test values as determined by job requirements but a minimum heavy duty tile test requirement is necessary.

Hod

A portable trough for carrying mortar, bricks, etc., fixed crosswise on top of a pole and carried on the shoulder.

Hollow casting

See Casting, drain.

Hopped-up mud

Mortar mixed with an accelerator.

Horizontal broken joints

A style of laying tile with each course offset one-half its length.

Horizontal Broken Joints

A style of laying tile with each course offset one-half its length.

Hot cement

Newly manufactured cement which has not had an opportunity to cool after burning and grinding of the component materials.

Hot-Mopped Pan

A type of shower pan made of alternating layers of hot asphalt and tar paper.

Hot mud or hot stuff

Mortar mixed with an accelerator. Hot pressing.- See Pressing, hot, hopped-up mud.

Hue

The attribute by which a perceived color is distinguished as red, yellow, green, blue, purple or a combination of these. White, gray and black colors possess no hue. Lightness - The attribute by which a perceived color is judged to be equivalent to a member of the continuous series of grays ranging from black to white. Saturation - The attribute by which a perceived color is judged to depart from gray of equal lightness toward a pure hue.

Hydrate

A chemical combination of water with another compound or an element.

Hydrated lime

Calcium hydroxide, a dry powder obtained by treating quicklime with Hydraulic - (cement) (mortar) Those products that will set or harden under water.

Impervious

That degree of vitrification evidenced visually by complete resistance to dye penetration.(ASTM C 242). NOTE: The term impervious generally signifies zero absorption, except for floor and wall tile which are considered impervious up to 0.5 percent water absorption.

Impervious tile

Water absorption of 0.5 percent or less.

In/Out Corner

Trim tile for turning a right-angle inside or outside wall corner.

Incised

Decorated by cutting or indenting the ware surface. (ASTM C 242).

Inglaze decoration

See Decoration, inglaze.

Initial setting time

The time required for a freshly mixed cement paste, mortar, or concrete to achieve initial set. (See also Final setting time.)

Ironstone ware

(Also called Stone China or Granite Ware) Historic term for a durable English earthenware. (ASTM C 242).

ISO

International Standards Organization

Isolation joint

A separation between adjoining parts of a concrete structure, usually a vertical plane, at a designed location such as to interfere least with performance of the structure, yet such as to allow relative movement and avoid formation of cracks elsewhere in the concrete. (See also Contraction joint.)

Jagged edges

Irregularities left on the edges of the tile due to the use mainly of hand cutting tools.

Jasper ware

A vitreous, opaque, colored unglazed ceramic ware having white or contrasting relief-decorations and containing a substantial amount of barite. Originally developed by Josiah Wedgwood. (ASTM C 242).

Jigging

Forming ceramic ware from a plastic body by differential rotation of a profile tool and mold, the mold having the contour of one surface of the ware and the profile tool that of the other surface. (ASTM C 242).

Jitterbug

A grate tamper for pushing coarse aggregate slightly below the surface of a slab to facilitate finishing.

Joint filler

Compressible material used to fill a joint to prevent the infiltration of debris and to provide support for sealants.

Joint sealant

Compressible material used to exclude water and solid foreign materials from joints.

Joint, control

See Expansion joint.

Joint, contraction

See Contraction joint.

Joint, expansion

See Expansion joint.

Jointer (concrete)

A metal tool about 6 in. (150 mm) long and from 2 to 4 1/2 in. (50 to 100 mm) wide and having shallow, medium, or deep bits (cutting edges) ranging from 3/16 in. to 3/8 in. (5 to 20 mm) or deeper used to cut a joint partly through fresh concrete.

Journeyman

An experienced reliable worker who has learned his trade and works for another person.

Kaolin (china clay)

A refractory clay consisting essentially of minerals of the kaolin group and which fires to a white or nearly white color. (ASTM C 242).

Keene's cement

A cement composed of finely ground, anhydrous, calcined gypsum, the set of which is accelerated by the addition of other materials.

Knockings

The oversize residue obtained in screening a ceramic slip. (ASTM C 242).

Kyanite

The most abundant of the mineral polymorphs that include andalusite and sillimanite. Kyanite is used as a source of mullite in ceramics. (ASTM C 21)

L cut

A piece of tile cut or shaped to the letter L.

Laitance

A layer of weak and nondurable material containing cement and fines from aggregates, brought by bleeding water to the top of wet concrete; the amount of which is generally increased by overworking or over manipulating concrete at the surface by improper finishing or by job traffic.

Lap

The length by which one bar or sheet of fabric reinforcement overlaps another.

Latex

A water emulsion of a synthetic rubber or plastic obtained by polymerization and used especially in coatings and adhesives.

Latex-portland cement grout

A portland cement grout with a special latex additive which results in a less rigid, less permeable grout than regular portland cement grout.

Latex-portland cement mortar

A mixture of Portland cement, sand, and special latex additives which is used for bonding tile to back-up material. It is less rigid than portland cement mortar.

Lath

A wood strip or metal mesh, which acts as a background or reinforcing agent for the scratch coat or mortar coat.

Layout Lines

Lines chalked on a sub strate to guide in accurately setting tile.

Layout stick

A long strip of wood marked at the appropriate joint intervals for the tile to be used. It is used to check the length, width, or height of the tile work. A common name for this item is idiot stick.

Leadless glaze

A ceramic coating matured to a glassy state on a formed article, or the material or the mixture from which the coating is made, to which no lead has been deliberately added. (ASTM C 21) NOTE: This does not imply that the glaze is nontoxic or that it contains no lead. Because of plant practices and conditions, a small percentage of lead, 0.1 to 0.2% (by dry weight), expressed as lead monoxide, may be present.

Leg

A tile wall running alongside a bathtub or abutment. This term sometimes is used to describe a narrow strip of tile wall.

Level

- a. A surface or line with all points at the same elevation
- b. Horizontally straight.

Leveling coat

See Plumb scratch.

Light duty tile

Tile suitable for limited pedestrian traffic such as entryways in single family residences.

Lime

Specifically, calcium oxide (CaO); also, loosely, a general term for the various chemical and physical forms of quicklime, hydrated lime and hydraulic hydrated lime.

Limestone

A sedimentary carbonate rock, composed chiefly of calcite (Ca CO₃), but sometimes containing appreciable dolomite. (ASTM C 21)

Lippage

A condition where one edge of a tile is higher than an adjacent tile giving the finished surface an uneven appearance.

Live load

Any load that is not permanently applied to a structure.

Load-bearing wall

A wall designed and built to carry superimposed vertical and shear loads as opposed to no-load-bearing walls.

Lugs

See Self-spacing tile.

Marble mosaic tile

Tile made of small marble tesserae that varies slightly in size, usually about one half inch square and mounted on sheets of paper to facilitate installation. (CTI)

Marble tiles

Quarried marble, usually 3/4" thick or less, various sizes, finishes available are polished, honed, split faced, acid washed etc.

Master Grade certificate

A certificate that states tile listed in the shipment and described on the certificate are made in accordance with TCA 137.1-76.

Mastic

Tile adhesive.

Mastic grout

A chemical mixture of organic and inorganic ingredients forming a one part grouting composition that is used directly from the manufacturer's container.

Mat glaze

A colorless or colored ceramic glaze having low gloss. (ASTM C 242).

Maturing range

The time-temperature range within which a ceramic body, glaze, or other composition may be fired to yield specified properties. (ASTM C 242-72)

Medium duty tile

Tile suitable for pedestrian traffic such as entryways in multiple dwellings and lobbies.

Melt

To change a solid into a liquid by the application of heat; or the liquid resulting from such action. (ASTM C 242).

Metal quarry tile rack

Metal quarry tile racks are available in many patterns, and they can be made to order for special patterns. They are used to maintain the same width between the quarry tiles.

Mexican paver tile

Terra cotta-like tile, used mainly for floors, and handmade. This tile varies in color, texture and appearance, from tile to tile and within each tile. Available in squares up to 12 inches, hexagon, octagon, elongated hexagon, fleur de lis and other shapes. Tiles are coated with various types of sealers because of their soft absorptive characteristics. Coatings provide a wear surface for residential to light commercial use.

MIA

Marble Institute of America.

MMSA

Materials & Methods Standards Association.

Mix

The act or process of mixing; also mixture of materials, such as mortar or concrete.

Mixer

A machine used for blending the constituents of concrete, grout, mortar, cement paste, or other mixture.

Mixer efficiency

The adequacy of a mixer in rendering a homogeneous product within a stated period; homogeneity is determinable by testing for relative differences in physical properties of samples extracted from different portions of a freshly mixed batch.

Mixer no tilting

A horizontally rotating drum mixer that charges, mixes, and discharges without tilting.

Mixer plant

See Batch plant.

Mixer, colloidal

A mixer designed to produce colloidal grout.

Mixer, horizontal shaft

A mixer having a stationary cylindrical mixing compartment, with the axis of the cylinder horizontal, and one or more rotating horizontal shafts to which mixing blades or paddles are attached.

Mixer, open-top

A truck-mounted mixer consisting of a trough or a segment of a cylindrical mixing compartment with paddles or blades rotating about the horizontal axis of the trough. (See also Mixer, horizontal shaft.)

Mixer, pan

See Mixer, vertical shaft.

Mixer, tilting

A rotating drum mixer that discharges by tilting the drum about a fixed or movable horizontal axis at right angles to the drum axis. The drum axis may be horizontal or inclined while charging and mixing.

Mixer, vertical shaft

A cylindrical or annular mixing compartment having an essentially level floor and containing one or more vertical rotating shafts to which blades or paddles are attached; the mixing compartment may be stationary or rotate about a vertical axis.

Mixing cycle

The time taken for a complete cycle in a batch mixer, i.e., the time elapsing between successive repetitions of the same operation (e.g., successive discharges of the mixer).

Mixing speed

Rotation rate of a mixer drum or of the paddles in an open-top, pan, or trough mixer, when mixing a batch; expressed in revolutions per minute (rpm), or in peripheral feet per minute of a point on the circumference at maximum diameter.

Mixing time

The period during which the constituents of a batch of concrete are mixed by a mixer; for a stationary mixer, time is given in minutes from the completion of mixer charging until the beginning of discharge; for a truck mixer, time is given in good mixing in a specific mixing speed or expressed in terms of total revolutions at a specific mixing speed.

Mixing water

The water in freshly mixed sand-cement grout, mortar, or concrete, exclusive of any previously absorbed by the aggregate (e.g., water considered in the computation of the net water-cement ratio).

Mixture

The assembled, blended, co-mingled ingredients of mortar, concrete, or the like; or the proportions for their assembly.

Modular ratio

The ratio of modulus of elasticity of steel E_s , to that of concrete E_c , usually denoted by the symbol N .

Modulus of deformation

A concept of modulus of elasticity expressed as a function of two time variables; strain in loaded concrete as a function of the age at which the load is initially applied and of the length of time the load is sustained.

Modulus of rigidity

The ratio of unit shearing stress to the corresponding unit shearing strain; referred to as “shear modulus” and “modulus of elasticity in shear”; denoted by the symbol G . (See also Modulus of elasticity.)

Modulus of rupture

A measure of the ultimate load carrying capacity of a beam and sometimes referred to as “rupture modulus” or “rupture strength”. It is calculated for apparent tensile stress in the extreme fiber of a transverse test specimen under the load which produces rupture. (See also Flexural strength.) NOTE: The actual stress in the extreme fiber is less than the apparent stress since the flexure formula employed in the calculation is valid only for stresses within the proportional limit of the material. Nevertheless, the nominal rupture strength so obtained is considered the rupture modulus.

Modulus of sub grade reaction

Ratio of load per unit area of horizontal surface (of a mass of soil) to corresponding settlement of the surface; it is determined as the slope of the secant, drawn between the point corresponding to zero settlement and a specified point on the load-settlement curve obtained from a plate load test on a soil using a 30 in. or greater diameter loading plate.

Moist room

A room in which the atmosphere is maintained at a selected temperature (usually $23.0^{\circ}\text{C} \pm 1.7^{\circ}\text{C}$ or $73.4\text{--}13.0^{\circ}\text{F}$) and a relative humidity of at least 98 percent, for the purpose of curing and storing cementitious test specimen; the facilities must be sufficient to maintain free moisture continuously on the exterior of test specimens.

Moisture expansion

An increase in dimension or bulk volume of a ceramic article caused by reaction with water or water vapor. (ASTM C 242). NOTE: This reaction may occur in time at atmospheric temperature and pressure, but is expedited by exposure of the article to water or water vapor at elevated temperatures and pressures.

Moisture movement

1. The movement of moisture through a porous medium;
2. The effects of such movement on efflorescence and volume change in hardened cement paste, mortar, concrete, or rock.

Mold

1. A divider containing a cavity into which neat cement, mortar, or concrete test specimens are cast;
2. A form used in the fabrication of precast mortar or concrete units (e.g., masonry units).

Mold oil

A mineral oil that is applied to the interior surface of a clean mold, before casting concrete or mortar therein, to facilitate removal of the mold after the concrete or mortar has hardened. (See also Form oil, Bond breaker, and Release agent).

Moment distribution

A method of structural analysis for continuous beams and rigid frames whereby successive converging corrections are made to an assumed set of moments until the desired precision is obtained; also known as the Hardy Cross method.

Monochrome decoration

A single color decoration. (ASTM C 242).

Monocottura (Single-Fired)

Manufacturing process which allows the simultaneous firing of the clay with the glaze producing a finished tile. A single firing.

Monolith

A body of plain or reinforced concrete cast or erected as a single integral mass or structure.

Monolithic concrete

Concrete cast with no joints other than construction.

Monolithic terrazzo

The application of a 5/8 in. (15 mm) terrazzo topping directly to a specially prepared concrete substrata, eliminating an underbed.

Monolithic topping

On flatwork: a higher quality, more serviceable topping course placed promptly after the base course has lost all slump and bleeding water.

Monomer

An organic liquid, of relatively low molecular weight, that creates a solid polymer by reacting with itself or other compounds of low molecular weight.

Monomolecular

Composed of single molecules; specifically, films that are one molecule thick. Denotes a thickness equal to one molecule (e.g., certain chemical compounds develop a "monomolecular film" over bleeding water at the surface of freshly placed concrete or mortar as a means of reducing the rate of evaporation).

Montmorillonite

See Montmorillonoid.

Montmorillonoid

A group of clay minerals, including montmorillonite, characterized by a sheet-like internal molecular structure; consisting of extremely finely divided hydrous aluminum or magnesium silicates that swell on wetting, shrink on drying, and are subject to ion exchange.

Mortar

A mixture of cement paste and fine aggregate; in fresh concrete, the material occupying the interstices among particles of coarse aggregate; in masonry construction, mortar may contain masonry cement, or may contain hydraulic cement with lime (and possibly other admixtures) to afford greater plasticity and workability than are attainable with standard hydraulic cement mortar. (See also Cement, masonry and Masonry mortar).

Mortar Bed

The layer of mortar on which tile is set. The final coat of mortar on a wall, floor or ceiling.

Mortar hoe

The mortar hoe is used for hand-mixing mortar. The best type has a perforated blade and a handle about 66" in length. The hoe should be kept clean and free of all mortar so it can be pushed and pulled easily through a box of mortar.

Mortar mixer

An electric or gas driven machine designed to mix mortar.

Mortar pumping machine

The mortar pumping machine is used with the mortar mixer. Mixed mortar is poured into the hopper, and a pneumatic gun forces the mortar through a hose. The mortar can be delivered through the hose to tile setters working as high as 13 stories above the street. Admixtures are added to the mortar as a bonder so that the mortar in the hose will not separate. The plastering gun can be used on the hose, or the hose can be used as a hoist.

Mortarboard

The mortarboard is used as a table to hold mortar. It is usually 30" square.

Mosaics

Small tile or bits of tile, stone, or glass. These are used to form a surface design or an intricate pattern.

Mounted tile

Tile assembled into units or sheets by suitable material to facilitate handling and installation. Tile may be face-mounted, back-mounted or edge-mounted. Face-mounted tile assemblies may have paper or other suitable material applied to the face of each tile, usually by water soluble adhesives so that it can be easily removed after installation and prior to grouting of the joints. Back-mounted tile assemblies may have perforated paper, fiber mesh, resin or other suitable material bonded to the back and/or edges of each tile which becomes an integral part of the tile installation. Back-mounted and edge mounted tile assemblies shall have a sufficient exposure of tile and joints surrounding each tile to comply with bond strength requirements. Tile manufacturers must specify whether back-mounted and edge-mounted tile assemblies are suitable for installation in swimming pools, on exteriors and/or in wet areas.

Mud

A slang term for mortar.

Murals

Tile installed in a precise area of a wall or floor to provide a decorative design or picture. Glass or marble mosaic tile (tesserae) made to form a picture or design. Ceramic tile, painted and fired to form a picture or design. See Decorated and Decoration.

Muriatic acid

Hydrochloric acid (30% HCL), commercial grade.

Natural clay tile

A tile made by either the dust-pressed method or the plastic method, from clays that produce a dense body having a distinctive, slightly textured appearance. (ASTM C 242).

Neat cement grout

Hydraulic cement in the non-hydrated state. Neat cement grout. A fluid mixture of hydraulic cement and water, with or without admixture; also the hardened equivalent of such mixture.

Neat cement paste

A mixture of hydraulic cement and water, both before and after setting and hardening.

Neoprene

A type of synthetic rubber with outstanding oil resistance. Can be used for quick-setting, high strength adhesives.

NIOSH

National Institute for Occupational Safety and Health

Nominal sizes

This is the approximate facial size or thickness of tile, expressed in inches or fractions of an inch, for general reference.

Non-slip tile

Tile having greater non-slip characteristics due to an abrasive admixture, abrasive particles in the surface, grooves or patterns in the surface or because of natural non-skid surface characteristics.

Non-vitreous (non-vitrified) tile

That degree of vitrification evidenced by relatively high water absorption. (ASTM C 242). NOTE: The term nonvitreous generally signifies more than 10.0 percent water absorption, except for floor and wall tile which are considered nonvitreous when water absorption exceeds seven percent.

NTCA

National Tile Contractors Association

NTMA

National Terrazzo and Mosaic Association

Opaque glaze

A nontransparent colored or colorless glaze. (ASTM C 242).

Open time

The period of time during which the bond coat retains its ability to adhere to the tile and bond the tile to the substrate.

Orange peel

A pitted texture of a fired glaze resembling the surface of rough orange peel. (ASTM C 242)

Organic adhesive

A prepared organic material, ready to use with no further addition of liquid or powders, for bonding tile to back-up material by the thinset method. Cures or sets by evaporation.

Oven ware

Ceramic whiteware for culinary oven use. (ASTM C 242).

Overglaze decoration

See Decoration, overglaze.

P.S.I. or psi

Pounds per square inch, a unit measure of pressure.

Packing house tile

Similar to quarry tile but usually of greater thickness.

Paper and wire

Felt paper and wire mesh (or metal lath) that are used as a backing; for the installation of tile. Paper mounted ceramic mosaics Ceramic mosaic tiles mounted on paper. Paper is applied to face of tile in sheets approximately twelve inches wide, twenty-four inches long.

Pate dure (hard paste)

A French term designating ceramic whitewares fired at relatively high temperatures. (ASTM C 242).

Pate tendre (soft paste)

A French term designating ceramic whitewares fired at relatively low temperatures. (ASTM C 242).

Pavers

Unglazed porcelain or natural clay tile formed by the dust-pressed method and similar to ceramic mosaics in composition and physical properties but relatively thicker with 6 in. or more of facial area. (ASTM C 242).

Peeling

See Orange peel; Shivering.

Pencil rod

Reinforcing steel rod with a diameter of 1/4".

pH

A simplified system of measuring acidity or alkalinity irrespective of the acid or alkali involved; in which neutrality is 7.0, e.g., Mineral Acid Solution is 1.0-2.8, Acetic Acid Solution or Citric Acid Solution is 3.0-4.0, Ammonia is 9.0, Lime Water is 12.0.

Physical properties of ceramic tile

Those properties as measured by ASTM tests.

Pinholes

Imperfections in the surface of a ceramic body or glaze resembling pin pricks. (ASTM C 242).

Pitted

Indentations in the finished surface of individual tiles other than at the corners and edges. These are caused by sharp corners on trowels and other tools of the workmen and are different than manufacturing defects.

Pitting

Development of relatively small cavities in a surface, due to phenomena such as corrosion or cavitation, or, in concrete, localized disintegration. (See also Pop out.)

Plaster

A cementitious material or combination of cementitious material and aggregate that, when mixed with a suitable amount of water, forms a plastic mass or paste which when applied to a surface, adheres to it and subsequently hardens, preserving in a rigid state the form or texture imposed during the period of plasticity; also the placed and hardened mixture. (See also Stucco.)

Plastic cracking

Cracking that occurs in the surface of fresh concrete soon after it is placed and while it is still plastic.

Plastic flow

See Creep.

Plastic pressing

See Pressing, wet.

Plasticity

A complex property of a material involving a combination of qualities of mobility and magnitude of yield value; that property of freshly mixed cement paste concrete, or mortar which determines its resistance deformation or ease of molding.

Plasticizer

A material that increases plasticity of a cement paste, mortar, or concrete mixture.

PLI

Pounds per lineal inch.

Plumb

Perpendicular to a true level.

Plumb scratch

An additional scratch coat that has been applied to obtain a uniform setting bed on a plumb vertical plane.

Pointing mix

Mortar with a consistency of stiff paste. The mix is forcibly compressed into the tile joints where it hardens.

Poisson's ratio

The ratio of transverse (lateral) strain to the corresponding axial (longitudinal) strain resulting from uniformly distributed axial stress below the proportional limit of the material; the value will average about 0.2 for concrete and 0.25 for most metals.

Polychrome decoration

A multicolor decoration. (ASTM C 242).

Polyethylene

A thermoplastic high-molecular-weight organic compound used in formulating protective coatings or, in sheet form, as a protective cover for concrete surfaces during the curing period, or to provide a temporary enclosure for construction operations.

Pop out

The breaking away of small portions of a concrete surface due to internal pressure which leaves a shallow, typically conical, depression.

Porcelain

A glazed or unglazed vitreous ceramic white ware used for technical purposes. This term designates such products as electrical, chemical, mechanical, structural, and thermal wares when they are vitreous. (See also, Alumina porcelain; Cordierite porcelain; Forsterite porcelain; Steatite porcelain; Titania porcelain; and Zircon porcelain.) (ASTM C 242).

Porcelain process

The method of producing glazed ware by which a ceramic body and glaze are matured together in the same firing operation. (ASTM C 242).

Porcelain tile

A ceramic mosaic tile or paver that is generally made by the dust-pressed method, of a composition resulting in a tile that is dense, fine-grained, and smooth with sharply formed face, usually impervious. (ASTM C 242).

Porosity, apparent

The relationship of the open pore space to the bulk volume, expressed in percent. (ASTM C 242).

Post-tensioning

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

Pot life

The period of time during which a material maintains its workable properties after it has been mixed.

Pottery

All fired ceramic wares that contain clay when formed, except technical, structural and refractory products. (ASTM C 242).

Precast

A concrete member that is cast and cured in other than its final position; the process of placing and finishing precast concrete.

Precast concrete

Concrete cast elsewhere than its final position.

Preload

The term used to describe mortar that has been placed and allowed to harden prior to bonding tile to it with thin-set materials.

Pregouted tile

A surface unit consisting of an assembly of ceramic tile bonded together at their edges by a material, generally elastomeric, which seals the joints completely. Such material (grout) may fill the joint completely, or partially and may cover all, a portion or none of the back surfaces of the tiles in the sheets. The perimeter of these factory pregouted sheets may include the entire, or part of the joint between the sheets or none at all. The term edge bonded tile is sometimes used to designate a particular type of pregouted tile sheets having the front and back surfaces completely exposed.

Pressing

See Pressing, dry; Pressing, hot; Pressing, wet.

Pressing, dry

Forming ceramic ware in dies from powdered or granular material by direct pressure. (ASTM C 242).

Pressing, hot

A jiggering process wherein a heated profile tool or plunger is employed. (ASTM C 242-72)

Pressing, wet (plastic pressing)

Forming ceramic ware in dies from a plastic body by direct pressure. (ASTM C 242).

Prestressed concrete

Concrete in which internal stresses of such magnitude and distribution are introduced that the tensile stresses resulting from the service loads are counteracted to a desired degree; reinforced concrete the prestress is commonly introduced by tensioning the tendons.

Pretensioning

A method of pre-stressing reinforced concrete in which the tendons are tensioned before the concrete has hardened.

Primary clay (residual clay)

A clay which remains geologically at its site of formation. (ASTM C 242).

Process, dry (dry mix)

The method of preparation of a ceramic body wherein the constituents are blended dry, following which liquid may be added as required for subsequent processing. (ASTM C 242).

Process, wet (slip process)

The method of preparation of a ceramic body wherein the constituents are blended in sufficient liquid to produce a fluid suspension for use as such or for subsequent processing. (ASTM C 242).

Pumice

A highly porous and vesicular lava usually of relatively high silica content composed largely of glass drawn into approximately parallel or loosely entwined fibers, which themselves contain sealed vesicles.

Pumped concrete

Concrete which is transported through hose or pipe by means of a pump.

Pure

See Neat cement.

Pure coat

A thin coat of pure portland cement which is used to bond tile to mortar.

Pyrophyllite

A hydrated aluminum silicate mineral of the theoretical composition $A_{12}O_3 \cdot 4SiO_2 \cdot H_2O$, having physical properties in the raw state resembling mineral talc. (ASTM C 21)

Quality assurance

A system of procedures for selecting project or portion thereof to perform the functions intended, and assuring that these levels are obtained.

Quality control

A system of procedures and standards by which a constructor, product manufacturer, materials processor, or the like, monitors the properties of the finished work.

Quarry tile

Unglazed tile, usually 6 in. or more in surface area and 1/2 to 3/4 in. (13 to 19 mm) in thickness, made by the extrusion process from natural clay or shales. (ASTM C 242).

Quartering

A method of obtaining a representative sample by dividing a circular pile of a larger sample into four equal parts and discarding opposite quarters successively until the desired size of sample is obtained.

Quicklime

Calcium oxide (CaO). (See also Lime.)

Rack

A metal grid that is used to properly space and align floor tiles.

Ragging Off

The procedure of spreading a damp cloth and pulling it over the tile surface during the tile grouting process in order to clean the tile.

Rake or rake line

The inclination from a horizontal direction.

Raked joint

A joint in a masonry wall which has the mortar raked out to a specified depth while it is only slightly hardened.

Raw glaze

A glaze compounded primarily from raw constituents, that is, containing no prefused materials. (ASTM C 242).

Receptor

A metallic or nonmetallic waterproof support for a shower stall.

Reducer

A trim unit used to reduce the radius of a bullnose or a cove to another radius or to a square.

Reference Lines

A pair of lines chalked on a substrate that intersect at a 90 degree angle and establish the starting point for plotting a grid of layout lines to guide in accurately setting tile.

Refractory concrete

Concrete having refractory properties, and suitable for use at high temperatures (generally about 315° to 1315° C), in which the binding agent is hydraulic cement.

Reinforced concrete

Concrete containing adequate reinforcement (prestressed or not prestressed) and designed on the assumption that the two materials act together in resisting forces.

Reinforced masonry

Unit masonry in which reinforcement is embedded in such a manner that the two materials act together in resisting forces.

Reinforcement, mesh

See Welded-wire fabric and Welded-wire fabric reinforcement.

Relative humidity

The ratio of the quantity of water vapor actually present to amount present in a saturated atmosphere at a given temperature; expressed as a percentage.

Release agent

Material used to prevent bonding of concrete to a surface. (See also Bond breaker.)

Return

The ending of a small splash wall or a wainscot at right angle to the major wall.

Rockingham ware

A semi-vitreous ware or earthenware having a brown or mottled brown bright glaze. Originated in England on the estate of the Marquis of Rockingham. (ASTM C 242).

Rod saw

The rod saw is one of the newest tools used in the cutting of tile. It is a steel rod approximately 1/8" in diameter. The rod has tungsten carbide particles embedded in the surface. The rod saw is used to cut circles or irregular curves in tile.

Rodding

See Floating.

Roughing in

The act of preparing a surface by applying tar paper and metal lath (or wire mesh). Sometimes called wiring.

Rubber trowel

The rubber trowel used for grouting is a non-porous synthetic-rubber-faced float that is mounted on an aluminum back with a wood handle. This trowel is used to force material deep into tile joints and to remove excess material for a perfect finish.

Rubbing stone

A Carborundum stone that is used to smooth the rough edges of tile.

Running Bond

Stretchers overlapping one another by one-half unit, with vertical joint in alternate courses.

Sag

A term used when a wall surface has developed a slide.

Salamander

A portable source of heat, customarily oil burning, used to heat an enclosure around or over newly placed concrete to prevent the concrete from freezing.

Saltillo Tile

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

Sampling

The method of obtaining tile for testing from an agreed-upon lot.

Sand holes

Tiny pits in the surface of the tile.

Sandblast

A system of cutting or abrading a surface such as concrete by a stream of sand ejected from a nozzle at high speed by compressed air; often used for cleanup of horizontal construction joints or for exposure of aggregate in architectural concrete.

Sandblasting

A method of scarifying the surface of concrete or masonry to provide a bondable surface. Compressed air is used to propel a stream of wet or dry sand onto the surface.

Sander-grinder (Cutting tool)

In addition to sander and grinder attachment both uninstalled and installed tile. The cutting is done dry.

Sand-Portland Cement Grout

An on-the-job mixture of portland cement, fine graded sand, lime and water.

Saw cut

A cut in hardened concrete utilizing diamond or silicone-carbide blades or discs.

Sawed joint

A joint cut in hardened concrete, generally not to the full depth of the member, by means of special equipment.

Scaffolding

A temporary structure for the support of deck forms, cart ways, or workmen, or a combination of these such as an elevated platform for supporting workmen, tools, and materials; adjustable metal scaffolding is frequently adapted for shoring in concrete work.

Scarify

Mechanical means of roughening a surface to obtain a better bond.

Scarred faces

Surface blemishes caused by scraping or other marring of the tile.

Scratch

A mixture of portland cement, sand, and water.

Scratch coat

The first coat of plaster or stucco applied to a surface in three-coat work; usually cross-raked or scratched to form a mechanical key with the brown coat.

Scratched

Tiles that have surface scratches (usually glazed wall tile) caused from sand, tools or rough handling.

Scratcher

Any serrated or sharply tined object that is used to roughen the surface of one coat of mortar to provide a mechanical key for the next coat.

Scratches

Any serrated or sharply tined object that is used to roughen the surface of one coat of mortar to provide a mechanical key for the next coat. See also Scarify.

Scratching

The application of a scratch coat and its combing with a scratches.

Screed

To strike off mortar laying above the desired plane or shape.

Screed guide

Firmly established grade strips or side forms for unformed concrete which will guide the strike off in producing the desired plane or shape.

Screed or Screed Strip

Strips of wood, metal, mortar or other material used as guides on which a straightedge is worked to obtain a true mortar surface.

Sculptured tile

Tile with a decorative design of high and low areas molded into the finished fare.

Sealant

An elastomeric material that is used to fill and seal the expansion joint. This material prevents the passage of moisture and allows horizontal and lateral movement at the expansion joint.

Sealing compound

See joint sealant.

Second grade ceramic tile

Ceramic tile with appearance defects not affecting wearing or sanitary qualities.

Self-furring

Metal lath or welded wire fabric formed in the manufacturing process to include means by which the material is held away from the supporting surface, thus creating a space for “keying” of the insulating concrete, plaster, or stucco.

Self-spacing tile

Tile with lugs, spacers, or protuberances on the sides. These devices automatically space the tile for the grout joints. (SS-T-308b)

Semi-mat glaze

Having moderate gloss. (ASTM C 242).

Semi-porcelain

A trade term designating semi-vitreous dinnerware. (ASTM C 242).

Semi-vitreous

Less than 3 percent to 7 percent water absorption.

Set

The condition reached by a cement paste, mortar, or concrete when it has lost plasticity to an arbitrary degree, usually measured in terms of resistance to penetration or deformation; initial set refers to first stiffening; final set refers to attainment of significant rigidity; also, strain remaining after removal of stress.

Setting Bed

The layer of mortar on which the tile is set. The final coat of mortar

on a wall or ceiling may also be called a setting bed.

Setting time

See Set.

Shade

The gradation of color.

Sharp sand

Coarse sand of which the particles are of angular shape.

Shear

A force that tends to slide or rupture one part of a body from another part of the body or from attached objects.

Shear test

A method of separating two materials by forcing (either by compression or tension) the interfaces to slide over the other. The force exerted is distributed over the entire bonded area at the same time. Strengths are recorded in psi.

Shear wall

A wall portion of a structural frame intended to resist lateral forces, such as earthquake, wind, and blast, acting in or parallel to the plane of the wall.

Shelf Life

The maximum period of time that an item can be stored before it is used.

Ship and galley tile

A special quarry tile having an indented pattern on the face of the tile to produce an anti-slip effect. (ASTM C 242).

Shivering (peeling)

The splintering which occurs in fired glazes or other ceramic coatings due to critical compressive stress. (ASTM C 242).

Shore A hardness

The reading of a material's hardness on a durometer, the scale of which is 0-100, used on elastomers as polyacrylic esters and

natural rubber. Consists of a pinpoint depression into the material, the material being at least 100 mils thick. A Shore A reading of 80 equals a Shore D reading of 30.

Shore D hardness

The reading of a material's hardness on a durometer similar to the Shore A durometer, the scale of which is 0-100, used on rigid and semi-rigid materials such as polystyrene. Consists of a pinpoint depression into the material. Both the Shore A and Shore D instruments are made by the Shore Instrument Manufacturing Company, Inc., Jamaica, New York.

Shower pan

Terminology in some areas for Waterproof membrane. (CTI)

Shower receptor

The floor and side walls of the shower tip to and including the curb of the shower. (CTI) Shower receptor liner or lining. Terminology used in some areas for Waterproof membrane.

Shrinkage

The decrease in volume, or contraction, of a material by the escape of any volatile substance, or by a chemical or physical change in the material. Shrinkage crack. Crack due to restraint of shrinkage.

Shrinkage cracking

Cracking of a structure or member due to failure in tension caused by external or internal restraints as reduction in moisture content develops, or as carbonation occurs, or both.

Silica (SiO₂).

The common oxide of silicon usually found naturally as quartz or in complex combination with other elements as silicates. Various polymorphs and natural occurrences of silica include cristobalite, tridymite, cryptocrystalline chert, flint, chalcedony, and hydrated opal.

Silicone Grout

An engineered elastomeric grout system for interior use.

Sink Angle

Trim shape used on a drain board at the corners of the kitchen sink. This trim shape, which is AU 106, is also called a "Butterfly"

Skid resistance

A measure of the frictional characteristics of a surface.

Skim coat

See Bond coat.

Slake

Allowing the mixtures of mortar, thinset mortar or grout to stand for a brief period of time after the ingredients have been thoroughly combined and before the final mixing occurs. Slaking enables the moisture in the mix to penetrate lumps in the dry components, making it easier to complete the mixing procedure.

Slide

A fresh tile wall that has buckled or sagged. This condition may be caused by excessive mortar, insufficient lime in the mortar, or excessive moisture in the scratch coat. A slide also may result if the surface is slick or the mortar is too soft.

Slip (slurry)

A suspension of ceramic material in liquid. (ASTM C 242).

Slip coating

A ceramic material or mixture other than a glaze, applied to a ceramic body and fired to the maturity required to develop specified characteristics. (ASTM C 242).

Slip glaze

A glaze consisting primarily of a readily fusible clay or silt. (ASTM C 242).

Slip process

See Process, wet.

Slip-resistant tile

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

Slot cut

Description of a tile that has been cut to fit around pipes or switch boxes. This tile is usually in the shape of the letter u or the letter L.

Slump

A measure of consistency of freshly mixed concrete, mortar, or stucco equal to the subsidence measured.

Slump cone

A mold in the form of the lateral surface of the frustum of a cone with a base diameter of 8 in. (203 mm), top diameter 4 in. (102 mm), and height 12 in. (305 mm), used to fabricate a specimen of freshly mixed concrete for the slump test; a cone 6 in. (152 mm) high is used for tests of freshly mixed mortar and stucco.

Slump test

The procedure for measuring slump.

Slurry

A mixture of water and any finely divided insoluble material, such as portland cement, slag, or clay in suspension.

Slush coat

A pure coat of very soft consistency. This also is called a slurry coat.

Smelt

A specific batch or lot of frit. The act of melting a batch of frit. (ASTM C 21).

Smelter

A furnace in which the raw materials of a frit batches are melted. (ASTM C 21)

Soaping tile

The method of applying a soapy film to newly tiled walls to protect them from paint and plaster during construction.

Soffit

The underside of a part or member of a structure, such as a beam, stairway, or arch.

Soil

A generic term for unconsolidated natural surface material above bedrock.

Soldier course

Oblong tile laid with the long side vertical and all joints in alignment.

Solid casting

See Casting, solid.

Solids

The dry ingredients remaining after evaporation of all volatile solvent or water. Not a fluid and not flowable.

Soluble (adj.)

Describes the property of a substance to dissolve in another and form a solution, e.g., sugar is soluble in water.

Solution

The process by which a substance (solid, liquid, or gas) is homogeneously mixed with a liquid, called the solvent, and the mixture being incapable of mechanical separation into its components. Alloys and amalgams are solutions of metals in metal; brines are solutions of a salt in water; syrups are solutions of sugars in water. Solution should not be confused or used interchangeably with such terms as dispersion, suspension or emulsion.

Solvent

In a solution, that substance which dissolves another is called the solvent. Solvent is also a common term for many liquids which are commonly used in making solutions, e.g., organic solvents, petroleum solvents, etc. Also used for thinning down a fluid, and for cleaning purposes.

Spacers

T-shaped, Y-shaped and cross shaped, they are used in installations to separate tile on walls and floors. They are manufactured in thicknesses of 1/16", 1/8", 1/4", 3/8", and 1/2".

Spacing; mix

A dry or dampened mixture of one part Portland cement and one part extra-fine sand. This mix is used as a filler in the joints of mounted ceramic mosaic tiles to keep them evenly spaced during installation.

Spall

A fragment, usually in the shape of a flake, detached from a larger mass by a blow, by the action of weather, by pressure, or by expansion within the larger mass.

Spandrel

That part of a wall between the head of a window and the sill of the window above it.

Special-purpose tile

A tile, either glazed or unglazed, made to meet or to have specific physical design or appearance characteristics such as size, thickness, shape, color, or decoration; keys or lugs on backs or sides, special resistance to staining, frost, alkalies, acids, thermal shock, physical impact, high coefficient of friction, or electrical properties. (ASTM C 242).

Specific gravity

The ratio of the weight of any volume of a mass or substance to the weight of an equal volume of water at a given temperature. The specific gravity of a substance times the density of water equals the density of the substance.

Specks

Any dark dots on the tile less than 1/64 inch in diameter, and noticeable at a distance of more than three feet.

Spit out

A glaze defect of the pinhole type developed in the decorating kiln, due to evolution of minute gas bubbles from body or glaze. (ASTM C 242).

Splash walls

The walls of a tile drain board or bathtub.

Split L Cut

An improper "L" cut that is made by splitting a tile instead of cutting it.

Spodumene (alpha spodumene)

A lithium mineral of the theoretical composition $\text{Li}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 4\text{SiO}_2$ (monoclinic crystallization) which on heating inverts to beta spodumene, a form having very low nil thermal expansion. (ASTM C 21)

Spots

Any dark dots on the face of the tile more than 1/64 inch in diameter.

Spread

The quantity of adhesive per unit area applied to an adherent, usually expressed in pounds of adhesive per thousand square feet of area.

- (1) Single Spread refers to application of adhesive to only one adherent.
- (2) Double Spread refers to application of adhesive to both adherents.

Stability

The ability to remain unchanged; equilibrium, steady, constant. Ability to restore to original condition after being disturbed by some force.

Stacking tile

A method of installation whereby glazed tiles are placed on the wall so that they are in direct contact with the adjacent tiles. The width of the joints is not maintained by the use of string or other means. The tiles may be set with either straight or broken joints.

Staining

Discoloration caused by a foreign matter chemically affecting the material itself.

Standard grade ceramic tile

Highest grade of all types of ceramic tile.

Steam curing

Curing of concrete or mortar in water vapor at atmospheric or higher pressures and at temperatures between about 100° and 420°F (40° and 215° C). (See also Autoclave curing).

Steatite porcelain

A vitreous ceramic whiteware for technical application in which magnesium metasilicate (MgO - SiO₂) is the essential crystalline phase. (ASTM C 242).

Steatite talc

Massive talc or the pulverized product, thereof having the general formula 3 MgO - 4SiO₂, H₂O. (ASTM C 242).

Steatite whiteware

Any ceramic whiteware in which magnesium metasilicate (MgO - SiO₂) is the essential crystalline phase. (ASTM C 242).

Steel square

The steel square is one of the most important tile setting tools. The large arm of the square is 2" wide and 24" long and is called the body or blade. The smaller arm is at a 90-degree angle to the blade and is 1½" wide and 16" long; it is called the tongue. The point where the outside edges of the blade and tongue join is called the heel. The surface with the manufacturer's name is called the face; the opposite surface is called the back.

Stoneware

A vitreous or semi vitreous-ceramic ware of fine texture, made primarily from nonrefractory fire clay. (ASTM C 242).

Stoning

Use of a carborundum stone to smooth rough edges caused by cutting.

Storage life

The period of time during which a materials can be stored under specified temperature conditions and remain suitable for use. Sometimes called "shelf life".

Story pole

See Layout stick.

Straight joint

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

Straightedge

A straight piece of lumber that is used to rod mortar and to align tile.

Stretcher

A masonry unit laid with its length horizontal and parallel with the face of a wall or other masonry member.

Striking joints

A process of removing excess grout from the joints by wiping with a sponge or cloth or scraping with a curved instrument.

Structural defects

Cracks or laminations in the body of the tile which detract from the aesthetic appearances and/or the structural soundness of the tile installation.

Stucco

A cement plaster used for coating exterior walls and other exterior surfaces of buildings. (See also Plaster.)

Stud

Vertical member of appropriate size (2x4 to 4x10 in.) (50x 100 to 100x250 mm) and spacing (16 to 30 in.) (400 to 750 mm) to support sheathing; also a headed steel device used to anchor steel plates or shapes to concrete members.

Sub floor

A rough floor – plywood or boards – laid over joists and on which an underlayment or substrate is installed.

Substrate

The underlying support for the ceramic tile installation.

Taber Abrader

An instrument used to test the abrasion resistance of a material.

Take-off man

Someone who can read blueprints and is familiar with the specifications. This person makes tracings of special details concerning the tile work after gathering the necessary information and then estimates the labor, materials, tile quantities, and special trim shapes needed to complete the job.

Tapping tile

An inspection technique whereby a coin, key, or other small metallic object is tapped against an installed tile to determine by sound whether the tile is completely bonded to its backing. Tile setters often tap the tile with a pointing trowel to determine that a good bond has been achieved.

TCNA

Tile Council of North America

Tensile strength

The pulling force necessary to break a given specimen divided by the cross sectional area. Units given in lbs./ins. (P.S.I.). It measures the resistance of a material to stretching without rupture. Normally is not used with reference to elastic materials which recover after elongation.

Terra cotta

Hard baked clayware, including tile, of variable color, averaging reddish red-yellow in hue and of high saturation. (CTI)

Terra sigillata

A porous, red clay ware characterized by embossed decorations of the same color and a satin-like unglazed surface. Originated on the Island of Samos. (ASTM C 242).

Terrazzo concrete

See Concrete, terrazzo.

Terrazzo tile

A terrazzo surface, on a Portland cement and sand body, made by a mixture of marble chips and portland cement and usually ground smooth. (CTI)

Tessara, tessarae

A small chip of glass or marble used in mosaic formations. (CTI)

Test

A trial, examination, observation, or evaluation used as a means of measuring a physical or chemical characteristic of a material, or a physical characteristic of a structural element or a structure.

Testing machine

A device for applying test conditions and accurately measuring results.

Testing of ceramic tile

The act of determining whether ceramic tile is acceptable. See Physical properties of ceramic tile.

Thermal conductivity

Ability of a material to conduct heat; physical constant for quantity of heat that passes through unit volume of a substance in unit of time when difference in temperature of two opposite faces is one degree.

Thick-Bed Mortar

A thick layer of mortar (more than 1/2 inch) that is used for leveling.

Thin-set

A term used to describe the bonding of tile with suitable materials applied approximately 1/8" thick. See also Dry-Set mortar.

3-4-5 Triangle

A triangle with sides in the proportion of 3:4:5, which produces one 90 degree corner. Plotting a 3-4-5 triangle is a method used to establish a pair of square reference lines on a large surface. These lines can be used to determine if the installation site is square and to create a grid of layout lines for setting tile.

Threshold, marble

A piece of marble placed beneath a door.

Tie wire

The 18-gauge galvanized wire used in construction work.

Tile

A ceramic surfacing unit, usually relatively thin in relation to facial area, made from clay or a mixture of clay and other ceramic materials, called the body of the tile, having either a glazed or unglazed face and fired above red heat in the course of manufacture to a temperature sufficiently high to produce specific physical properties and characteristics. (ASTM C 242).

Tile assemblies

See definition for Mounted tile.

Tile cutter

The cutter is one of the most efficient and economical tools in the tile setting trade. A popular model is the hand-drawn tile cutting board that is adjustable.

Tile, mounted

Tile assembled into units or sheets and bonded together to facilitate handling.

Tile, back-mounted

Mounted tile with perforated paper, fiber mesh, or other suitable bonding material applied to the backs or edges of the tile so that a relatively large proportion of tile area is exposed to the setting bed.

Tile, face-mounted

Mounted tile with paper applied to the faces of the tile. The water-soluble adhesive can be removed easily prior to grouting of the joints.

Tile Nipper

Special pliers that nibble away little bites of ceramic tile to create small, irregular or curved cuts.

Tin Oxide (Sri OQ)

In finely ground form used in glazes as an opacifier.

Titania porcelain

A vitreous ceramic whiteware for technical application in which titania (TiO₂) is the essential crystalline phase. (ASTM C 242).

Titania whiteware

Any ceramic whiteware in which titania (TiO₂) is the essential crystalline phase. (ASTM C 242).

Tongue and groove

A type of lumber or precast concrete tile having mated projecting and grooved edges to provide a tight fit, abbreviated "T & G."

Trammel bar

A trammel bar, which is easy to construct, is more accurate than many other layout tools. It is used to erect perpendicular lines and to bisect angles. The tile setter can make a trammel bar from a stick of a size that is suitable for the particular job.

Trial batch

A batch of concrete prepared to establish or check proportions of the constituents.

Trimmers

Units of various shapes consisting of such items as bases, caps, corners, moldings, angles, etc. necessary or desirable to make a complete installation and to achieve sanitary purposes as well as architectural design for all types of tile work. (ASTM C 242).

Trowels***Buttering trowel***

The blade of the buttering trowel is 4 1/2" wide and 7" long. It is used in buttering pure cement to tile, a method commonly used in the eastern states. The trowel is more efficient than the pointer for working on the larger and heavier tiles because more weight can be placed on it.

Flat trowel

The flat trowel is used in conjunction with the hawk for the transferring of mortar from the mortarboard to the wall or to other vertical surfaces. It is frequently used for spreading pure cement finished float coat. The flat trowel also is used for spreading mortar on floor surfaces before tiles are set.

Gauging trowel

The gauging trowel is larger than the pointing trowel but smaller than the buttering trowel. Tile setters prefer the 3 1/4" x 7" size.

Notched trowels

Notched trowels are available in the Serrated, square tooth, and round designs. The teeth are made in various sizes. The correct tooth size and depth must be used to apply the thickness of bonding mortar specified. These trowels are used to apply all of the various kinds of bonding materials for ceramic tile. When the teeth become worn, the trowel has to be sharpened or replaced.

Underglaze decoration

See Decoration, underglaze. Unglazed paver tile. See Pavers.

Unglazed quarry tile

See Quarry tile.

Unglazed tile

A hard, dense tile of homogeneous composition throughout, deriving color and texture from the materials of which the body is made. The colors and characteristics of the tile are determined by the materials used in the body, the method of manufacture, and the thermal treatment. (ASTM C 242).

Urethane

An elastomeric polymer with excellent chemical and water resistance. Single component (moisture cure) and 2-part (chemical cure) systems are available. Both types may be applied in a fluid state and cure (polymerize) after installation. Typical tile industry applications include sealants, caulks, waterproofing membranes, and high performance flexible adhesives.

Vapor barrier

Waterproof membrane placed under concrete floor slabs that are placed on grade.

V-Cap Trim

V-shaped trim tile used on the front edge of a countertop. The tile's top surface is gently curved upward at the front edge to prevent water from running onto the floor.

Vellum glaze

A semi-mat glaze having a satin-like appearance. (ASTM C 242).

Vertical broken joint

Style of laying tile with each vertical row of tile offset for half its length.

Vitreous

0.5 percent to 3 percent water absorption.

Vitreous (Vitrified)

That degree of vitrification evidenced by low water absorption. (See also Impervious; Nonvitreous; Semivitreous.) (ASTM C 242).

NOTE: The term vitreous generally signifies less than .5 percent absorption, except for floor and wall tile and low voltage electrical porcelain which are considered vitreous up to 3.0 percent water absorption.

Vitreous slip

A slip coating matured on a ceramic body, producing a vitrified surface. (ASTM C 242).

Vitreous tile

Tile with water absorption of more than 0.5 percent, but not more than 3.0 percent. (ANSI A137.1-1980).

Vitrification

The progressive reduction in porosity of a ceramic composition as a result of heat treatment, or the process involved. (ASTM C 242).

Vitrification range

The maturing range of a vitreous body, producing a vitrified surface. (ASTM C 242).

Void

An unfilled space in a material of trapped air or other gas.

Wainscot Tile

The lower part of an interior wall when finished in tile.

Wall tile

A glazed tile with a body that is suitable for interior use and which is usually nonvitreous and is not required nor expected to withstand excessive impact.

Warpage

A concave or convex curvature of a tile so that the surface is not perfectly flat.

Water absorption

The ability to take up and retain water.

Water-cement ratio

The ratio of the amount of water, exclusive only of that absorbed by the aggregates, to the amount of cement in a concrete or mortar mixture; preferably stated as a decimal by weight.

Water level

The water level is a piece of clear plastic hose 3/8" to 1/2" in diameter and usually about 50' in length. It is filled with water, from which all air must be removed.

Waterproof membrane

A membrane, usually made of built-up roofing, to provide a positive waterproof floor over the substrate, which is to receive a tile installation using a wire reinforced mortar bed. (CTI)

Wearing course

A topping or surface treatment to increase the resistance of a concrete pavement or slab to abrasion.

Weathering

Changes in color, texture, strength, chemical composition or other properties of a natural or artificial material due to the action of the weather.

Welded-wire fabric

A series of longitudinal and transverse wires arranged substantially at right angles to each other and welded together at all points of intersection.

Welded-wire fabric reinforcement

Welded-wire fabric in either sheets or rolls, used to reinforce mortar and concrete.

Well-graded aggregate

Aggregate having a particle size distribution which will produce maximum density, i.e., minimum void space.

Wet areas

Tile surfaces that are either soaked, saturated or regularly and frequently subjected to moisture or liquids (usually water) such as gang showers, tub enclosures, showers, laundries, saunas, steam rooms, swimming pools, hot tubs and exterior areas.

Wet pressing

See Pressing, wet. Wet process. See Process, wet.

Wetting

The thorough impregnation of a material by a liquid. The more viscous a fluid, and the higher its surface tension, the more difficult it is for the liquid to "wet" materials. Certain additives, such as, water softeners, reduce surface tension or viscosity and improve wetting properties, allowing the material to be better absorbed.

Wetting agent

A substance capable of lowering the surface tension of liquids, facilitating the wetting of solid surfaces and permitting the penetration of liquids into the capillaries.

Whiting

Calcium carbonate powder of high purity. (ASTM C 242).

Wire mesh

See Welded-wire fabric.

Wood float

The wood float is sometimes used in place of the flat trowel for floating mortar. It is good for smoothing small irregularities left on the mortar bed, working the surface of the mortar before troweling on the pure coat, or compacting floor and deck mortar.

Workability

The property of freshly mixed concrete or mortar which determines the ease and homogeneity with which it can be mixed, placed, compacted, and finished.

Wrinkled sheets

Pertaining to ceramic mosaics mounted on paper. Due primarily to rough handling in shipment.

Yellow ware

A yellow semi-vitreous ware or an earthenware with a colorless clear glaze. (ASTM C 242).

Zircon porcelain

A vitreous ceramic whiteware for technical application in which zircon is the essential crystalline phase. (ASTM C 242).

Zircon whiteware

Any ceramic whiteware in which zircon is the essential crystalline phase. (ASTM C 242).