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Standard Terminology Relating to Chemical-Resistant Nonmetallic Materials[1]

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acid etch, *v*—to clean or alter a surface by the application of acid.

adhesion—the physical attraction of two substances, especially the macroscopically observable attraction of dissimilar substances.

aggregate—any inert material such as sand, gravel, slag, carbon, etc., usually consisting of various-sized particles and used with chemical-resistant binders to form chemical-resistant mortars.

back joint—a vertical mortar joint, parallel to the vertical substrate, between a chemical-resistant construction unit and a substrate or another chemical-resistant construction unit.

bearing area—for chemical-resistant polymer machinery grout, the portion of the grout surface in contact with the underside of a supported surface.

bed joint—a horizontal mortar joint between a chemical-resistant construction unit and a substrate or another chemical-resistant construction unit.

bend angle—180° minus the internal angle created by applying a load on the weld joining two sheets of plastic.

binder—a substance used to bond aggregates or fillers, or both, into a solid mass.

broadcast resin monolithic floor surfacing—a flooring system whereby a film of catalyzed resin binder is applied on a prepared concrete substrate followed immediately by the seeding to excess, into this wet film, of a dry inert filler. Upon hardening, any unbonded filler is removed. The application may be repeated once or several times to yield a greater thickness of surfacing. A top coat may be applied.

butt welding (machine)—the fusing together of two pieces of plastic which are aligned in the same plane, with the same mating thickness, by application of heat and pressure. Also called *hot-plate welding*.

castable, *n*—a combination of filler and suitable binder that is generally poured or compacted into place and which hardens.

catalyst—a substance whose presence initiates or changes the rate of a chemical reaction, but does not itself enter into the reaction.

DISCUSSION—Occasionally used in the vernacular to describe a setting agent, hardener, curing agent, or promoter, etc.

chemical-resistant—the ability of a material to resist degradation by reaction with, dissolution by, or reduction of physical continuity from contact with a chemical agent or agents, thereby retaining its capacity to perform as a structural or aesthetic entity.

chemical-resistant carbon brick—a brick comprised of carbon (including graphite) that is carbon bonded and fired to a minimum temperature of 1850°F (1010°C). This brick exhibits good resistance to thermal shock and resists exposure to a wide range of alkalies and acids, particularly hydrofluoric acid. When used in oxidizing conditions, temperature exposure should be less than 600°F (315°C).

chemical-resistant construction unit—a modular nonmetallic material, either vitreous or nonvitreous, used in industrial processes primarily for applications where chemical, thermal, and mechanical resistance is required.

chemical-resistant fireclay or shale brick—a kiln fired brick from clay, shale, or mixtures thereof that exhibits low absorption and high resistance to a wide range of chemical environments. This brick should not be used in hot caustic or where hydrofluoric acid or other fluoride chemical compounds are found. Commonly referred to as acid-resistant brick or acid-proof brick.

chemical-resistant polymer concrete—a construction material composed of a continuous phase (binder) of a polymer and a discontinuous phase (aggregate) generally used in applications where chemical resistance is required.

chemical-resistant resin grout—a mixture of liquid resin, filler and setting agent. The components form a mixture that subsequently hardens by chemical reaction. The setting agent may be separate or incorporated in the filler.

chemical-resistant polymer machinery grout—an intimate mixture of liquid resinous material, selected filler materials, and setting agent, which harden by chemical reaction to provide support for machine bases.

chemical-resistant resin monolithic surfacing—an intimate mixture of liquid resinous materials, selected filler materials, and setting agent. These components are mixed together, placed to a minimum thickness of 60 mils (1.5 mm), then hardened to form a bonded overlay.

chemical-resistant resin mortar—an intimate mixture of liquid resinous material, selected filler materials, and setting agent. These components form a trowelable mortar that subsequently hardens by chemical reaction.

[1] This terminology is under the jurisdiction of ASTM Committee C03 on Chemical-Resistant Nonmetallic Materials and is the direct responsibility of Subcommittee C03.05 on Terminology.

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