# Concrete Glossary

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**Accelerators:** Admixtures that decrease the setting time by increasing the rate of hydration.

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**Admixture:** A material other than water, aggregates, or cement that is used as an ingredient of concrete or mortar to control setting and early hardening, workability, or to provide additional cementing properties.

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**Aggregate:** Inert solid bodies such as crushed rock, sand, gravel.

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**Binder**: Hardened cement paste.

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**Bleed**: To have water seep to the surface of the cement paste due to settling.

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**Calcination**: Decomposition due to the loss of bound water and carbon dioxide.

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**Cement**: Finely powdered mixtures of inorganic compounds which when combined with water hardens with hydration.

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**Cement paste:** Cement plus water. When the mass has reacted with water and developed strength it is called hardened cement paste.

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**Clay**: Type of soil consisting of very fine particles.

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**Clinker**: The material that emerges from the cement kiln after burning. It is in the form of dark, porous nodules which are ground with a small amount of gypsum to give cement.

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**Compression**: Forces acting inwardly on a body.

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**Concrete**: A hard compact building material formed when a mixture of cement, sand, gravel, and water undergoes hydration.

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**Cure**: To keep concrete moist during initial hardening.

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**Deformation**: The process of changing the dimensions of a structure by applying a force.

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**Dormancy period**: Time period that concrete retains it workability.

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**Elasticity:** The ability of a material to return to its original shape after being stretched.

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**Forms**: Holders in which concrete is placed to harden.

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**Gypsum**: Calcium sulfate dihydrate, $CaSO_4 \cdot 2H_2O$ added to cement to regulate setting.

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**Hydration**: The reaction of cement with water to form a chemical compound.

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**Kiln**: High temperature oven.

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**Limestone**: Mineral rock of calcium carbonate.

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**Mortar**: Cement paste mixed with sand.

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**Pozzolan cement**: Volcanic rock powdered and used in making hydraulic cement.

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**Porosity**: The amount of empty space in concrete.

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**Portland cement**: A cement consisting predominantly of calcium silicates which reacts with water to form a hard mass.

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**Retardants**: Admixtures that increase the setting time by slowing down hydration.

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**Set**: Transformation of cement paste or concrete from a fluid-like consistency to a stiff mass.

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**Slump test**: Test used to determine workability.

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**Tension**: The stress resulting from elongation.

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**Workability**: How easily fresh concrete can be placed and consolidated in forms.