Types of Cement

Ordinary Portland Cement (OPC)
The most widely used cement, particularly for general construction, reinforced concrete buildings, bridges and pavements where soil conditions are normal and the concrete is not subject to sulphate hazards. OPC has excellent resistance to cracking and shrinkage.

White Cements
White Cement differs from OPC in its colour and fineness, and requires a higher kiln temperature to produce. White Cement is often used in interior decorations, ornamental concrete and decorative works. It is comparatively costly.

Slag Cements
(Ground Granulated Blast-Furnace Slag)
A by-product of iron manufacturing, molten slag collects at the bottom of a blast furnace and is diverted to a granulator, ground and used in cement. Typically, GGBFS cements contain 30-70% Portland cement clinker. Using slag makes concretes more consistent, with improved aggressive chemical resistance, flexural strength and higher workability. Energy consumption needed to make GGBFS is less and hence emits less greenhouse gases than in OPC manufacture.

Pozzolanic Cements
Pozzolans are a class of siliceous and aluminous materials which in the presence of water, react with calcium hydroxide to form compounds with cementitious properties. It has higher resistance to corrosion, but has a reduced rate of hardening and lower frost resistance than OPC. It is often used to produce concretes used in underground and underwater structures.

Blended Cements
Blended cements are a blend of Portland Cement and a combination of supplementary cementitious materials, such as GGBFS, silica or fly ash. The use of blended cements reduces water demand, uses less energy and has reduced water permeability when compared with OPC.