

Acid Resistance

Technocem Binder, because of the absence free calcium hydroxide and a lower alkalinity level is more resistant to acid environments. This coupled decreased permeability to corrosive liquids makes Technocem binder an ideal choice of construction material in acidic environments.

Advantages

Technocem binder as a viable alternative to Portland cement, offers several advantages including durability, versatility, speed, and ease-of-use, as well as cost and environmental benefits. The key advantages of our hydraulic binder are as follows,

- Increased rate of strength gain
- No Curing Required
- Impermeable to Water
- Can set in low temperature condition
- More resistant to fire
- High Early Strength
- Non-Shrink
- Sulphate Resistant
- No Priming Required

GREEN TECHNOLOGY

Environmental responsibility

Technocem binder has a much smaller carbon footprint than ordinary Portland cement. During the manufacturing process it reduces CO₂ emissions by 90% over conventional ordinary Portland cement manufacturing procedures. This is because our binder is produced via simple powder blending process thus eliminating the needs of firing of raw meal to a very high temperature and subsequently grinding it.

Cost benefits

Although Portland cement is less expensive on a first-cost basis than Technocem binder, its durability, rapid cure time, reduced shrinkage, and resistance to chemical attack outweigh the cost differentials, especially when the cost of time is added to the equation. For a contractor or owner, the value of time for a repair delay that results in the late opening of a parking garage, an airport runway, or a retail center often are much greater than the premium paid for rapid-hardening hydraulic binder. On many jobs, bonuses offered for getting a job done on time or a project completed earlier is money well spent.

Technocem
Specialty Binders & Construction Material

Quick Setting Curing free Binders



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TECHNOLOGY BRIEFING



Technocem is ultra high performance binder based on new generation microcrystalline technology manufactured using industrial byproducts having high hydraulic activity such as fly ash and slag.

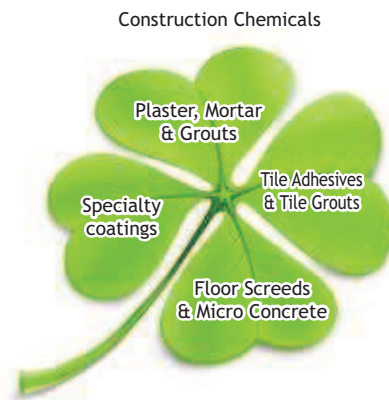
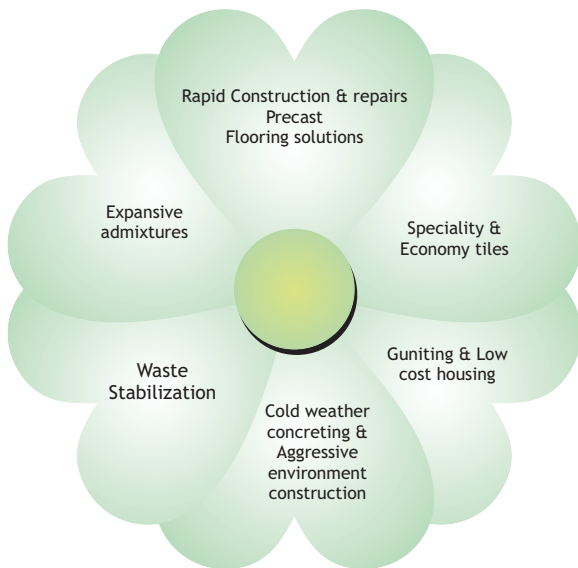
The chemistry of our binder differs from Portland cement in the sense it is composed primarily of hydraulic tetra calcium tri Aluminate Sulphate (CSA) and dicalcium silicate (C₂S). C₂S is the most durable compound found in Portland binder. The CSA compound hydrates to form ettringite - a strong needle like crystal that develops quickly to give our binder its quick strength and high performance.

Technocem key benefits include rapid strength gain, elimination of water curing and improved chemical resistance when compared to ordinary Portland cement.

Technocem is produced through careful selection and proportioning of raw materials having low or no carbon footprint and proprietary chemicals. The combination of state of the art production process and highly advanced quality control systems allows us to produce products with wide range of needs like

- Variable set times
- Improved corrosion protection
- Increased bond & Flexural strength
- Very minimal shrinkage

One Technology Multiple Possibilities



APPLICATION BRIEFING



Technocem Binder is used for a range of concrete applications, from aggressive chemical environments to fast setting grouts.

Why Technocem Binder?

Technocem binder offers reduced shrinkage and superior resistance to chemical attack because of the formation of microcrystalline structure of its hydration products. It achieves strength much faster than Portland cement because of the spontaneous dissolution of its oxide components and ability of it to connect quicker forming a solid. Hence many installations can be put into service in as little time as three hours.



Applications where early strength gain is desired

- Panel replacement in concrete roads
- Tunnel advancement
- Industrial floorings
- Airport and railway shutdowns
- Disaster hit regions

Applications where chemical resistance is required

- Sewer pipes
- Construction in sulfate containing soils
- Tidal zones
- Petrochemical Industries
- Chemical processing facilities



Low Shrinkage

Technocem binder requires higher amount of water to hydrate its oxide compounds when compared to typical Portland binder compounds. Nearly all the water is used up in the hydration process resulting in a dense concrete with very low drying shrinkage.



Durability

Technocem binder, because of the absence of certain mineral phases like tri calcium aluminate (which is responsible for deterioration by sulfate attack in ordinary Portland cement) is more resistant to sulfate and chlorides. Because of careful control of particle size during the manufacturing process the permeability of the binder to water and other corrosive liquids are minimized greatly enhancing the durability of the binder. Because of Technocem binder's ability to resist chlorides and other salts it provides increased protection to the steel when compared to ordinary Portland cement.