

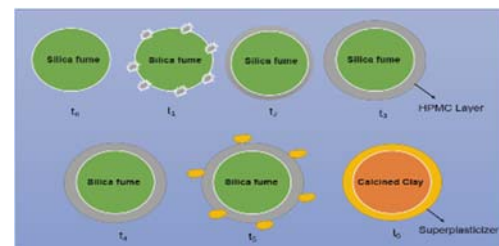
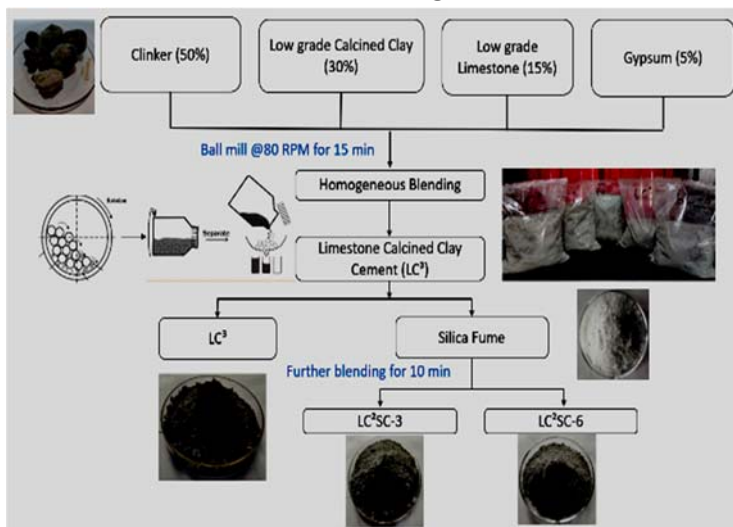
Low Carbon Cement Concrete Composites using Sustainable Chemical Admixtures

Technology in Brief

This technology approach is about the development of low-carbon cement concrete composites which employ sustainable chemical admixtures and redispersible additives to reduce environmental impact of concrete while enhancing its desirable properties. The process begins with the selection of eco-friendly admixtures, waste materials such as fly ash, slag, or silica fume, low grade limestone waste, along with low grade calcined clay—known for their capacity to reduce cement content and thus lowers carbon emissions. An optimized designed composite mix is then formulated, balancing the environmental advantages with necessary structural qualities. This technology marks a significant step forward in sustainable construction, offering reduced carbon emissions alongside enhanced concrete performance.

Salient Features/Advantages:

- Reduced Carbon Emissions by 35%
- Utilization of Industrial By-Products up to 40%
- Enhanced Durability and Performance
- Optimized Composite Mix Design
- Reduced cost for the production/ Implementation
- Efficient Curing and Chemical Interaction
- Innovation in Sustainable Construction



Properties & Standards	All the desirable properties were as per IS:8112, IS:383, IS: 2386, ASTM: C595
End Products	Sustainable Cementitious Composites, Lightweight Concretes
License/Commercialization	M/s. Litagg Industries Private Limited, Gujarat, India
TRL	08
Environmental Impact	<ul style="list-style-type: none"> • Lower carbon emission • Sustainable construction • Waste utilization • Circular economy, improves durability, extending the lifespan of structures