

CATEGORY

BUILDING MATERIALS/COMPONENTS



PRODUCT / TECHNOLOGY



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Technology Detail

ULTRATECH HIGH PERFORMANCE CONCRETE MIX (DURAPLUS)

Alternate to conventional concrete.



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CONTACT DETAILS

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BRIEF

UltraTech Duraplus is a special concrete which comprises of more than 50% replacement of cement by mineral admixtures as binder such as fly ash, slag, microfine slag, micro silica etc & highly engineered fibres in order to control permeability and micro cracks and enhance the durability of structure. Its highly engineered design mix, ensures resistance to chlorides and sulphates & increases the service life of the structure.

It is specially designed for residential construction so as to provide a long lasting strength to the structure, along with easier and faster construction. The Duraplus concrete can be used in foundations, walls, slabs, beams and columns of building and infrastructure.



SALIENT FEATURES

- Reduction in carbon footprint with high (more than 50%) replacement of cement with mineral admixtures.
- The production of 1 tonne of cement generates about 1 tonne of carbon dioxide in the atmosphere.
- Increased flow of concrete to minimum of 450 mm, helps reduce use of manpower and fuel /electrical energy for compaction of concrete.
- Ease of handling
- Reduction in honeycombing
- Faster placement reduces the duration of manpower and equipment required. This results in enhanced energy efficiency & faster construction.
- Water Penetration < 15 mm, tested as per DIN 1048. Results in almost 30% extension to the life of structure due to less porosity of the concrete.
- Low rapid chloride penetration Test (RCPT) value (<2,000 coulombs), gives the concrete immunity against environmental attacks.
- The repair & maintenance cost is reduced.

ECONOMIC ASPECTS

- The basic material cost is less than regular site mixed concrete as mineral admixtures used are available amply as by-products from industries such as steel plants and thermal power stations in the form of FlyAsh, Slag, Microfine Slag, Microsilica etc.
- Reduction in manpower, equipment and fuel by half therefore the energy consumption shall be half.
- The life cycle cost of the structure is reduced.





SUSTAINABILITY ASPECTS

- The limited availability of cement quality natural resource limestone, needs to be used judiciously, to cater to the construction industry and sustain for longer period.
- The cement replacement of 50% by mineral admixtures, will contribute significantly in extending the use of available lime stone resources.
- Almost 30% extension to the life of structure due to less porosity of the structure
- Reduction in plastic shrinkage cracking.

SUITABILITY & AVAILABILITY

- As this concrete is impermeable & durable, it is suitable for almost all concrete applications.
- Suitable for all regions/climates based on the availability of suitable mineral admixtures.
- The product is available Pan India.

LIMITATIONS, IF ANY

The mineral admixtures need to conform to required specifications.

MARKET LINKAGES

- The product can be supplied Pan India.





MAJOR PROJECTS

- Gurukrupa Realcon, Ghatkopar, Mumbai,
- Maheshwari Developers, Attapur, Hyderabad,
- Maheshwari Mega Ventures, MPM Time Square Mall, Hyderabad,
- Chandra Laxmi Infrastructure Ltd, Nagpur,
- Brigade Enterprises Ltd, Chennai,
- Shree Krishna Coporation, Surat,
- Larsen & Toubro Limited, Mumbai and Navi Mumbai,
- L & T Geo Structure Pvt Ltd, Chennai,
- Shree Vijay Laxmi Steels, Vizag,
- CEEBROS Hotels Pvt Ltd, Chennai.

CERTIFICATION/INDIAN STANDARD/ ENDORSEMENT

- Green Pro Certified

