UltraTech's white topping concrete for durable, aesthetic roads

UltraTech Concrete, a division of UltraTech Cement Ltd, and India's largest manufacturer of ready mix concrete (RMC) recently supplied white topping concrete for the Nandi Infrastructure Corridor Enterprise (NICE) Road in Bengaluru, Karnataka.

The 9.5 km link road and 4 km peripheral road will connect the proposed 111 km Bengaluru-Mysore Industrial Corridor (BMIC) expressway which is expected to reduce the 3-hour drive between the two cities to an hour.

White topping is the covering of an existing asphalt road with a layer of Portland cement concrete. It can be used on road surfaces where traditional asphalt surfaces have failed due to rutting or general deterioration. White topping concrete is known to improve the performance, durability and ride quality of road surfaces.

While the lifespan of ordinary bitumen roads is 5-10 years, the designed service life of white topping concrete surfaces is around 25-30 years, and includes minimum maintenance cost. It ensures faster moving traffic due to improved ride quality and skid resistance.

White topping is considered energy efficient as it saves 20-30 per cent energy required for illumination due to better reflectivity. This property also helps to reduce accidents, especially during nights. Further, it is 100 per cent recyclable after its service life, making it a green choice.

"White topping concrete represents an important potential application area from a sustainability perspective. With non-renewable resources such as fossil fuels and quarry-aggregates decreasing in availability, it is important to begin making decisions based on sustainability rather than on a first cost basis.

"White topping concrete overlays/ pavements are a cost-effective, sustainable choice for urban roads, state and national highways, and other pavement applications," says O P Puranmalka, Whole-time Director, UltraTech Cement Ltd, who has been elected new President of the Cement Manufacturers' Association.

Nice road white topping near Bangalore – Mysore corridor toll gate

UltraTech currently operates over 100 RMC plants in 35 cities across India that have world-class IT systems, quality control and vehicle tracking systems. UltraTech, a part of the Aditya Birla Group, has an unrelenting focus on safety and quality standards.

All of its state-of-the-art automatic plants are capable of producing the entire range of concrete including – UltraTech Concrete Plus, Lite, Duracon, Colourcon, Fibrecon, Thermocon, Hypercon, Pervious, Décor, Freeflow and Stainless.

Apart from supplying concrete through its commercial plants, UltraTech specializes in providing customized solutions to customers through its various operating models.

It currently operates RMC units for some of the most prestigious infrastructural projects in India such as Jaipur Metro, Mumbai Monorail, etc. For these projects, UltraTech also supplies custom designed, light weight and architectural concrete.

Cabinet nod to convert 7,200 km state roads to highways

The Centre has decided to convert 7,200 km of state roads into national highways. "The Cabinet Committee on Economic Affairs (CCEA) has given nod for declaring 7,200 km state highways as national highways," said a senior minister.

With this the total length of state highways converted into national highways during the UPA regime would reach about 17,000 km. About 10,000 km of state highways were declared national highways during the past 10 years.

These roads, sources said, are spread across states including Andhra Pradesh, Madhya Pradesh, Bihar and Uttar Pradesh besides bordering areas like Leh and Laddakh regions. The present length of national highways in the country is about 80,000 km.

Meanwhile, an official statement said there would be sufficient funds to take up improvement on new national highways.

"Keeping in view the estimated allocations likely to be made available for development of non-NHDP national highways based on the previous years' trends, it is anticipated that there would be adequate funds available for taking up improvement works on these new NHs," it said.

The National Highways Development Project (NHDP) is the flagship road building programme of the Ministry of Road Transport & Highways, currently running into seven phases.

It added that there would also be adequate funds available for taking up improvement of the remaining existing NH network of 21,271 km, not covered under any programme so far. The statement said expansion of NH network is a continuous process and declaration of a new NH is taken up from time to time, depending up on requirement of connectivity, inter-se priority and availability of funds.

BASF's Green Sense Concrete technology for Europe

BASF now offers its Green Sense Concrete technology for the resource- efficient production and processing of concrete in Europe as well. Green Sense Concrete is a service package from BASF that helps manufacturers improve performance characteristics of concrete such as resilience, workability, durability and environment friendliness.

The package comprises three components: The optimization of the concrete mix design by BASF experts, the use of hyper plasticizers from BASF such as MasterGlenium, and an eco-efficiency analysis of the concrete mix. The analysis serves to ascertain economic and ecological performance criteria of the concrete in comparison to traditional concrete mix designs.

The use of the Green Sense Concrete technology has, for example, led to savings of around 15,800 tons of CO^2 equivalent and approximately 25,400 megawatt hours of energy in the construction of the new One World Trade Center in New York City, compared with a conventional concrete mix design.

In this way, BASF provides solutions for urgent challenges of the construction industry such as the high share in primary energy consumption, in greenhouse gases and in fine dust emissions.

SUPREME INDUSTRIES

Floor protection during construction

Reasons for introduction of floor protection product.

While doing the interiors of any project, flooring is completed prior to electrical or plumbing work. During these works, scratches can develop, even resulting in breaking of tiles/ flooring due to dragging of heavy equipment.

As 25 per cent of the interior cost involves modern floorings, it is necessary to protect floors till total interior work is completed. Traditionally, Plaster of Paris (PoP) was used for this particular application, but not only laying and removing of PoP is a time-consuming and a tedious activity, but it also generates harmful dust.

What are the salient features of the product?

DURA floor protector is an innovative technology that provides universal cushioned flooring protection for wood, ceramic and vinyl floors. It is a closed-cell; polymer-based microcellular foam composed of thousands of cells trapped in the foam, with the reinforcement of high performance polymer which helps to resist all types of pressure imparted.

DURA floor protector is an innovative, cost-effective, new-generation product introduced by the Supreme Industries Ltd for protection of different types of floors. ***Ajay Mohta****, General Manager Construction Accessories Division elaborates.*

The product offers hassle-free application process compared to PoP, rosin paper, plastic runners or drop cloths. It does not absorb paint, oil, grease or any cleaning agents.

DURA floor protector is flexible; can be cut to fit in any space and works well on either side -- vacuum or sweep clean and reusable. It is environment friendly, inert and does not promote growth of bacteria and fungi.

Applications and advantages

DURA floor protector keeps floors safe from damage and debris and its anti-slip properties provide a safe work environment. It is a reusable, reversible surface protection for concrete, marble, granite and other counter surfaces.

It also provides cushioned universal floor protection during construction for hardwood, ceramic tile, linoleum and carpet floors as well as sinks and tubs and walkways and decks during building or remodeling.

It is already very well accepted by all leading architects, interior decorators, contractors, developers and builders as there has been an urgent need for an alternative to PoP and DURA floor protector now offers the most appropriate solution.

What is the marketing approach for the product?

Supreme Industries already has a vast distribution network all over India for other DURA range of products related to civil industry. A lot of new distribution networks have been created with the launch of this product including people involved in trading/retailing of flooring tiles, plywood and other products related to the interior decoration industry to make it easily available.

Other products under DURA range:

DURA membrane: High performance waterproofing membrane

DURA boardHD100: Compressible filler board for expansion joints

DURA rods: Closed cell, polymer based foam filler material with a circular profile

DURA shield: Material for spandrel insulation in glass façade buildings

DURA roofil: Lightweight, resilient, soft, polymer based closed-cell foam closure profile used as gap filler in roofing systems

DURA blockfiller: Special purpose, high density filler board

DURA vapourbarrier: High performance water vapour barrier material

DURA protector: Membrane Protection Board