The industry poised for upsize growth

Construction chemicals can save time and cost while ensuring superior quality of the end product. The growth of the construction industry in India has been phenomenal. India is ranked number one among the top ten spending nations on the construction sector in the world. India is spending 9 per cent of the GDP on various infrastructure projects.

With construction industry poised for phenomenal growth, the construction chemicals market is also experiencing substantial growth, which is dominated by demand for the best quality at low cost, construction chemicals play a vital role.

**Solutions for engineers**

Construction chemicals provide viable solutions to the civil engineers in order to build strong and durable structure while minimising the wastemanagement involved. Construction chemicals are important in the construction process as they lead to mass conserving and faster construction. These construction chemicals also increase the life of the structures and can protect them from various environmental calamities.

The construction chemist mainly consist of chemical formulations added in specific quantities during construction in cement or concrete or other construction material to meet the functional, aesthetic, and design requirement of civil structures.

The ordinary concrete requires further modifications to meet the expectations and deliver strong and sustainable structure suitable for various climatic and critical conditions. This is achieved through the addition of chemicals. Construction chemist include asphalt additives, concrete admixtures, protective coatings, adhesives and sealants.

**Superior quality of end product**

Construction chemicals can save time and cost while ensuring superior quality of the end product. Few of the benefits of using construction chemicals in construction are:

- Durability
- Protection from natural factors like soil
- Providing pleasant appearance without compromising over quality of the structure

**Types of construction chemicals**

The construction chemicals can be generally divided into the following groups:

- *Concrete Admixtures: Admixtures are ingredients other than water, aggregates, hydraulic cement and water that are added to the batch immediately before or during mixing, in nominal quantities.*

A proper use of admixtures offers certain beneficial effects to concrete, including improved quality, acceleration or retardation of setting time, enhanced frost and sulphate resistance, control of strength development, improved workability and enhanced finishability.

- *Waterproofing: Waterproof or water-resistant describes objects relatively unaffected by water or resisting the ingress of water under specified conditions. Such items may be used in wet environments or under water.*

Waterproofing compounds are available in liquid, solid, slurry and two-component coating forms. These compounds could be urethane based, modified asphalts, clay based or rubber polymers. Water proofing compounds are designed to stop water infiltration. These compounds or membranes can be extremely effective when applied to the exterior of a foundation system.

- *Flooring Compounds: Flooring compounds are mostly epoxy and polyurethane based. Industrial flooring compounds are used to meet various industrial needs such as abrasion, load impact, chemical attack, moisture penetration, strengthening of damaged floors, as well as improving the aesthetic appeal of the floor. They are also used to provide certain special features such as slip resistance, static resistance, fire resistance, antibacterial properties, and so on.*

Repair and Rehabilitation: The repair and rehabilitation is a highly unexplored and underdeveloped market. Retrofitting is basically the addition of new technology or features to older systems and improving the structures with energy efficiency. Rehabilitation is reconstruction of the structural components which were damaged. These products include cementitious repair mortars, concrete joint repair systems, polyelester or epoxy-based resin mortars, moisture insensitive epoxies, structural additives, synthetic adhesives, rust removers and corrosion inhibitors. The main rehabilitation methods are concrete jacking, steel jacking and FRP Wrapping.

**Miscellaneous**

Sealants-Sealants are used to seal expansion joints, cracks, joints in concrete roads and to fill gaps between concrete. There are four types of sealants.

- *Polyurethane sealants: These are most commonly used in the construction industry as expansion joints for concrete roads, structural joints and others.*

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At Choksey we experience immense gratitude in addressing our exclusive services towards our esteemed clients whom we had an opportunity to serve. We guarantee 100% waterproofing solutions for all types of structures at various stages of construction. The most important areas in a structure which require waterproofing are:

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- Ponds
- Liv Pits
- Floors
- Bathrooms
- Decks
- Water Bodies
- Swimming Pool
- Toilet / Bathrooms
- Service Floor Area
- Overhead and underground Water Tanks
- Kitchen

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