



# **INDIAN SUPER PLAST PC 600**

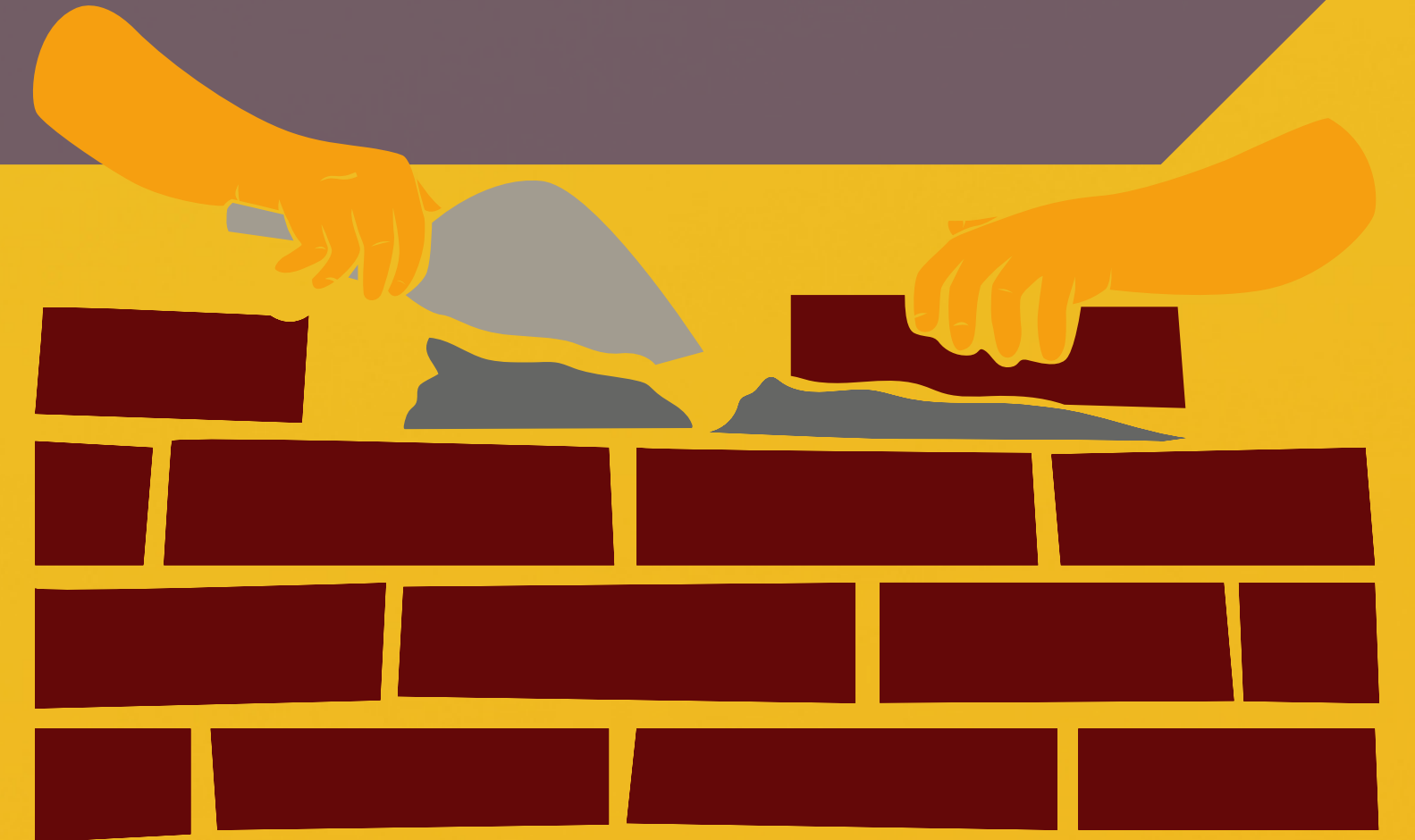
***The ART of construction chemicals!***



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**INDIAN SUPER PLAST PC 600 is a high performance, high strength and durable super plasticizer for concrete based on polycarboxylate ether polymer.**



**INDIAN SUPER PLAST PC 600 has better molecular weight distribution and degree of polymerization of the carboxylate monomer. The main polymer chain has carboxylate groups for the absorption on the surface of cement particles and long polyethylene oxide graft chains with slumps loss controlling agent (SLCA) that keep the cement particles physically away from each other. This results in superior workability of concrete mixtures coupled with the ability to maintain the fluidity and Slump retention for at least 4 hours after mixing at higher than ambient temperatures (35° C or more). The SLCA enhances slump retention apart from its role of providing fluidity to the Concrete mixture**

- **INDIAN SUPER PLAST PC 600** comprises particles in the size range of 0.25 to 0.35 micrometers and is synthesized through Nano-scale polymerization.
- It is a high range superplasticizer (water reduction up to 40% in control concrete) with superior cement dispersion ability to provide extremely high slump values, even to concrete mixtures made with a water-to-cement ratio of less than 0.30.

## **BENEFITS AND ADVANTAGES:**

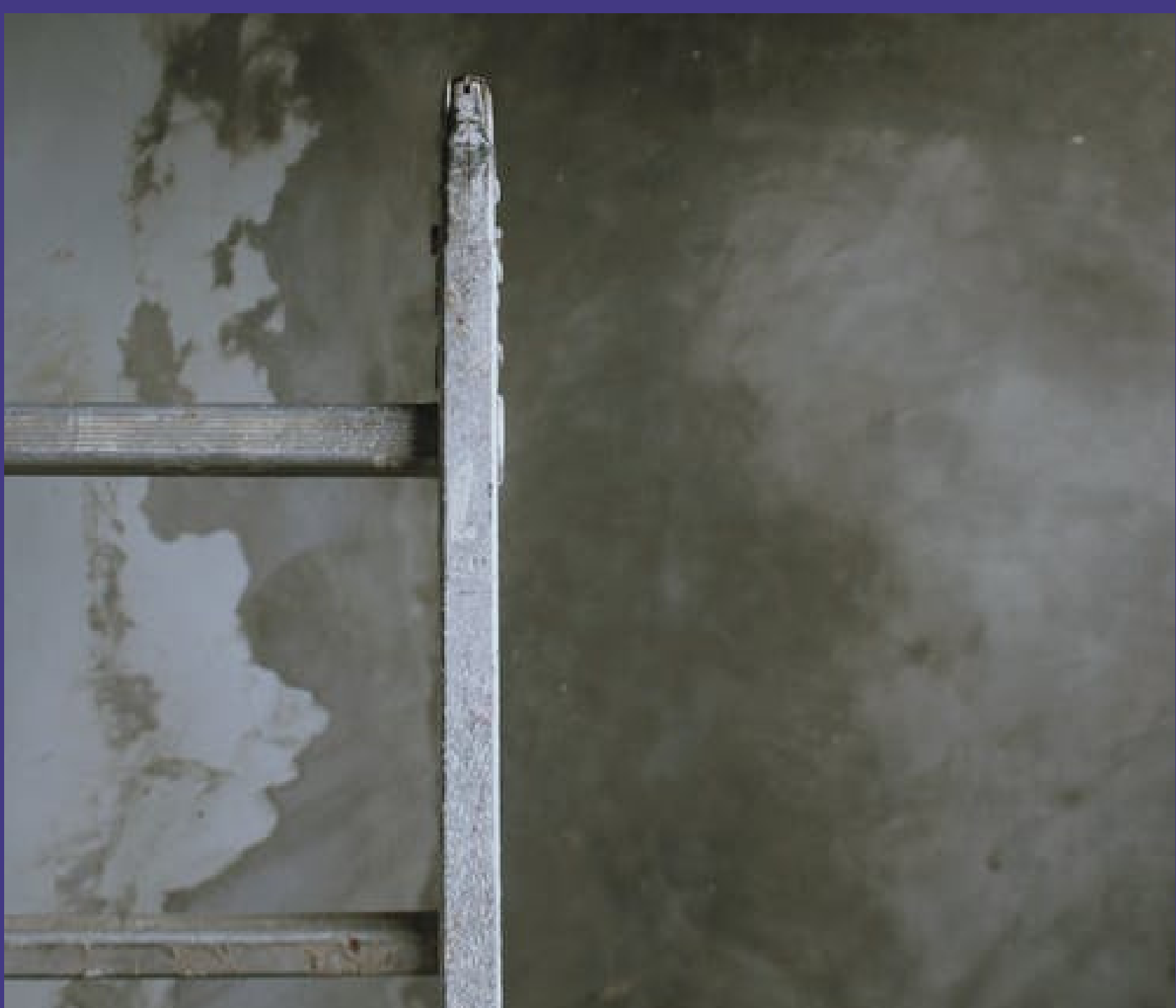
INDIAN SUPER PLAST PC 600 is highly dosage efficient- a much smaller dosage as compared to conventional superplasticizers is only sufficient.

INDIAN SUPER PLAST PC 600 imparts high flow-ability to the mixture so as to fill the formwork under its own weight (self-compacting ability) without any voids or segregation of aggregates.



This self-compacting concrete (SCC) maintains fluidity for longer periods (about 4 hours 35 °C because of the presence of SLCA). SLCA prevents slump losses by the "parachute effect" of slow absorption on Ettringite crystals formed at the beginning of cement hydration.

INDIAN SUPER PLAST PC 600 can be used as a pump ability enhancer along with plasticizing effect which allows high range water reduction leading to phenomenal increase in compressive strength, impermeability and durability.



INDIAN SUPER PLAST PC 600 is especially recommended for RMC production and in batching plants because of its very high slump retention characteristic imparted by SLCA. For long-distance transportation of concrete from plant to site, INDIAN SUPER PLAST PC 600 concretes can retain smooth pumpability with minimal set retardation. Ready-mixed concretes of moderate to very high strengths can be produced using this superplasticizer.

INDIAN SUPER PLAST PC 600 imparts high self-compaction or self-leveling, reduces shrinkage and creep, increases flexural strength, reduces carbonation, improves adhesion to reinforcing and pre-stressing steel, and develops early strength. It helps in producing cohesive, smooth, and fair-faced concrete.



## Chemical Properties

- Appearance: DARK colored liquid
- Specific Gravity:  $1.10 \pm 0.20$
- pH Value:  $7 \pm 1$
- Chloride Content: Nil (BS: 5075)
- Solubility: Water Soluble

## Standards

INDIAN SUPER PLAST PC 600 conforms to ASTM C 494 Type B, Type D, and Type G and complies with IS:9103 -1999.

## Application Instruction:

Dosage: 400 ml TO 800 ml per 50 kg cement.

As with most concrete additives, the efficiency obtained by the use of INDIAN SUPER PLAST PC 600 is dependent on dosage, water-to-cement ratio, the nature of constituent materials such as cement, fly ash, and ground granulated blast furnace slag. The type of cement, its fineness, and the C3A (tricalcium aluminate) content are important parameters that influence the performance of the chemical admixture. It is, therefore, necessary to assess the performance of concrete in its conditions of placing to decide the optimum dosage of INDIAN SUPER PLAST PC 600 to ensure desirable plastic and hardened concrete properties.

### **Compatibility With Cement:**

INDIAN SUPER PLAST PC 600 can be used with all types of OPC, composite cement (PSC and PPC), Silica Fume, Met kaolin, Rice Husk Ash (RHA), Pulverized Fuel Ash (PFA) and Ground Granulated Blast Furnace Slag (GGBFS).

### **Packaging:**

220 Ltrs HDPE drums.



### **Storage And Shelf Life:**

To be stored away from heat and frost. Best before 12 months from the date of manufacture.

### **Material Safety Data**

INDIAN SUPER PLAST PC 600 is made from chemicals which present no fire or health hazard. However, in case of spillage, washing with water is adequate. Eye / Skin contact should be avoided.

