

OVERVIEW

RANSCONMIX-SP410 is a High Range Water Reducing Admixture for High performance, High strength and durable concrete. It is based on a Polycarboxylate Ether (PCE) Polymer. The main polymer backbone has carboxyl groups for the adsorption on the surface of cement particles and alkoxy polyether lateral chains that keep the particles physically away from each other. This phenomenon of separating discrete solid agglomerating particles is known as Steric Hindrance. This result in superior fluidity of the mixture combined with better retention of workability (slump) as compared to the conventional super plasticizers based on Naphthalene or Melamine formaldehyde polycondensates. RANSCONMIX-SP410 comprises of particles less than 1/50 the size of cement grains, and is synthesized through ionic Polymerization in nano-scale.

RANSCONMIX-SP410 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 with water-to-cement ratio of less than 0.30.

RANSCONMIX-SP410 can provide slump retention of more than 120 minutes after mixing at higher than ambient temperatures (35°C or more).

PROPERTIES

- RANSCONMIX-SP410 is highly dosage efficient – a much smaller dosage as compared to conventional superplasticizer is only sufficient.
- RANSCONMIX-SP410 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 unlike conventional Superplasticizer that suffer rapid slump loss.
- RANSCONMIX-SP410 can be used as a pumpability enhancer combined with plasticizing effect which allows high range water reduction leading to phenomenal increase in compressive strength, impermeability and durability.
- RANSCONMIX-SP410 has no effect on the setting time of concretes and develops high early strength that allows rapid progress in large scale civil engineering applications.
- RANSCONMIX-SP410 is ideal for pre-cast and prestressed concrete products. The very high fluidity of the concrete mixtures facilitated by RANSCONMIX-SP410 results in smooth surfaces on removal of formwork.

DOSAGE

Range: 400 ml – 1200 ml per 100 kg cement.
(0.4% to 1.2% [v/w])

As with most commodity concrete additives, the efficiency obtained by the use of RANSCONMIX-SP410 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 C A (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 arrive at optimum dosage of RANSCONMIX-SP410 to ensure desirable plastic and hardened concrete properties.

INSTRUCTIONS FOR USE

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the waterproofing system are as follows:

COMPATIBILITY WITH CEMENT

RANSCONMIX-SP410 can be used with all types of OPC, composite cement (PSC and PPC), Silica Fume, Metakaolin, and Rice Husk Ash (RHA), Pulverized

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Fuel Ash (PFA) and Ground Granulated Blast Furnace Slag (GGBFS).

EFFECTS OF OVER DOSAGE

An over dose of double the recommended amount of **RANCONMIX-SP410** will result in very high workability and some retardation of setting time will occur. However, the ultimate compressive strength will not be impaired.

Mix Design:

RANS has a dedicated advisory service on concrete mix Design and can be controlled if assistance is required.

PRECAUTION:

Mix/Use only the required quantity of material, which can be utilized within stipulated pot life to avoid solidification.

Wash all the tools and tackles with industrial solvent immediately after the application is completed.

HEALTH & SAFETY

Avoid prolonged contact with eyes and skin. For detailed information refer to relevant material safety data sheet.

PACKGING & STORAGE

RANCONMIX-SP410 is available in 20, 50 and 200 Kgs Pails.

Store containers in a clean dry area protected from direct sunlight and extreme heat and cold. Unopened containers can be stored for 12 months.

**TECHNICAL
DATA**

Product	New Generation Slump Retention PCE Based Superplasticizer
Appearance	Amber colored liquid
Specific gravity	1.12 ± 0.01
pH Value	7±1
Air entrainment	Approx. 1% additional air entrained
Chloride Contents (As per BS:5075)	Nil
Solubility	Water soluble
Packaging	20 Kgs, 50 Kgs & 200 Kgs.
Storage	12 months in original unopened containers.

PICTURES/IMAGES AT GLANCE



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