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CEMENTAID

The Way to Better Concrete

Waterproofing and Admixtures

Superplastet SR

Slump Retaining, Superplasticising, Water Reducing and Strength Accelerating Admixture

Cementaid **SUPERPLASTET SR** is highly effective superplasticiser and high range water reducer which was developed specifically to improve the fresh and hardened properties of concrete. **SUPERPLASTET SR** is used to provide flowing, rheoplastic concrete at low water : cement ratios, with extended slump retention, as well as high early and ultimate strengths.

After extensive research, Cementaid has developed **SUPERPLASTET SR**, which combines excellent slump retention (without excessive retardation) and outstanding water reduction, producing extremely high early and ultimate strengths. Slump retention of up to 1.5 hours can be achieved, depending on temperatures. **SUPERPLASTET SR** is a breakthrough in admixture technology, giving the advantages of economic, high range water reduction and flowing, rheoplastic concrete to all sectors of the concrete industry. Due to its mild retardation **SUPERPLASTET SR** is ideally suited for premixed concrete use.

HOW SUPERPLASTET SR WORKS

In a normal concrete mix, cement particles tend to agglomerate, trapping mix water which would otherwise be used for lubrication. When **SUPERPLASTET SR** is added to the mix, its active component is absorbed onto the cement particles causing electrostatic repulsion and dispersing the cement particles evenly throughout the concrete mix. This liberates previously trapped mix water and promotes uniform, efficient cement hydration. **SUPERPLASTET SR** thus greatly increases workability, as well as increasing the rate of strength development. Shrinkage and permeability are reduced, while tensile and compressive strengths, density and durability are increased.

TYPICAL APPLICATIONS:

WALLS, COLUMNS, BEAMS AND PRE-STRESSED UNITS:

The much higher early strength of high-strength **SUPERPLASTET SR** concrete speeds construction. Even the extremely workable concrete used in thin-walled or heavily reinforced sections can reach very high early and ultimate strengths with the use of **SUPERPLASTET SR**, and prestressing schedules can easily be met.

PUMPED CONCRETE:

SUPERPLASTET SR improves the flow properties of pumped concrete.

Blockages are rare owing to the reduced tendency to segregate or bleed. **SUPERPLASTET SR** flowing concrete greatly reduces the pump pressure, increasing capacity of the pump in terms of both lift and distance. The increased pump capacity can be fully utilised as the flowing concrete can be placed easily and quickly, reducing overall construction time and cost.

FOUNDATIONS, BASES, FLOORS AND ELEVATED SLABS

Flowing concrete containing **SUPERPLASTET SR** simplifies and accelerates the placing. It can bring savings between 30% and 90% in wage costs. Uniform and good compaction of the concrete is assured, and design strengths are easily achieved.

PILE CAPS, RAFT SLABS, LARGE DIAMETER PILES AND COLUMNS

The cement reduction facilitated by the use of **SUPERPLASTET SR** results in a reduction in the heat of hydration and accordingly in the difference in temperature between the interior and exterior of the concrete section. By reducing this temperature differential **SUPERPLASTET SR** reduces the chances of thermal cracking while maintaining the desired strength.

PRECAST CONCRETE

SUPERPLASTET SR may have some application for specific types of precast concrete in hot climates (where curing cycles are greater than 16 hours). However, for the precast industry in general, we suggest **SUPERPLASTET F**, non-retarding grade for the precast industry particularly if accelerated curing is used.

DURABLE CONCRETE

The durability of concrete is largely dependent on its permeability and sorptivity. Therefore, **SUPERPLASTET SR** can be used to improve durability by reducing the water : cement ratio and thus the porosity.

OFF FORM CONCRETE

SUPERPLASTET SR flowing concrete retains excellent fluidity without segregation or excessive bleed, and the fines are particularly well distributed, giving excellent off-form concrete finishes. These two factors mean that flowing rheoplastic **SUPERPLASTET SR** concrete can be used for Class 1 fair-face (architectural) concrete without surface defects.

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