

# CEMTEC 190 SP

## SUPER PLASTICIZER FOR CONCRETE TYPE A AND TYPE F



### DESCRIPTION

**CEMTEC 190 SP** is a concentrated ready-to-use aqueous solution of organic polymers with high plasticizing effect. **CEMTEC 190 SP** contains no chlorides and complies with ASTM specification C 494 requirements for Type A and Type F admixtures. Its specific Gravity is 1.17 The fluidizing action of **CEMTEC 190 SP** provides:

### FEATURES & ADVANTAGES:

- Shorter steam-curing time.
- Higher strengths after steam-curing cycles.
- Better pumpability.
- Reduction in pouring and vibration time, especially in highly reinforced structures.
- Better surface finish, also applicable to light weight aggregates.
- Higher wear resistance.
- Improved bonding between concrete and reinforcing bars.
- Lower shrinkage due to reduced w/c ratio.

### BASIC USES:

In all types of concrete normal, light-weight, pumped, structural, particularly in precast and pre/ post-tensioned concrete whenever a regular precuring cycle is required before steam curing.

### SELF-LEVELING CONCRETE:

A plain, 2 - 3 cm slump concrete becomes selfleveling and attains a slump of 21 cm. or more following the addition of **CEMTEC -190 SP**. The concrete produced is flowable and highly cohesive with no segregation. Bleeding is usually below 0.05 cm<sup>3</sup>/cm<sup>2</sup>.

### SLUMP MAINTENANCE:

Concrete with **CEMTEC 190 SP** maintains the self-leveling properties from 1-11/2 hours at ambient temperature, depending on the type and dosage of the cement. Beyond this time workability will decrease gradually.

### HIGH STRENGTH CONCRETE:

the addition of **CEMTEC 190 SP** to plain concrete allows a water reduction of up to 30, while maintaining the same slump. The concrete will be easy to place, non-segregable and will require a shorter vibration time compared to plain concrete with the same workability.

### COMPRESSIVE STRENGTH:

Compressive strength versus plain concrete at the same slump, will increase proportionally, up to 50% and over, depending on water reduction.

### WORKING TIME:

High Strength concrete obtained with **CEMTEC 190 SP** has a workability time comparable with a plain concrete at equal slump.

### PERMEABILITY AND DURABILITY:

**CEMTEC 190 SP** reduces concrete porosity and so produces a more water-proof concrete. Observations have shown that water penetration has been reduced by factors of up to 1,000 times below that of plain concrete at the same slump. Reduced porosity and increased water-proof characteristics, resulting from the use of **CEMTEC 190 SP** especially if combined with CEMTEC Air Entraining Agent, provide durable concrete, with high resistance against freeze-thaw cycles and chemical agents

### HOMOGENEITY:

Compressive strengths in concrete treated with **CEMTEC 190 SP** have a lower variance allowing the operators to rely on more homogeneous mixes.

### ADDITION RATES:

Addition rate of **CEMTEC 190 SP** ranges from 0.7 Liter to 1.5 Liters per 100 kgs. of cement, depending on job conditions and purpose of work.

### COMPATIBILITY:

**CEMTEC 190 SP** can be used with all types of cement and can be combined with CEMTEC Air Entraining Agent when improved durability is required.

### DISPENSING:

**CEMTEC 190 SP** should be added directly in the mixer. In ready-mixed concrete **CEMTEC 190 SP** can be added at the batching plant taking into account that the self-leveling property will last for 1 - 1-1/2 hours at ambient temperature.

### PRECAUTIONS:

**CEMTEC 190 SP** should not be stored below 0°C In case of frost, **CEMTEC 190 SP** has to be heated and stirred before using.

COVERAGE	Contact CMCI Tech Dept
PACKAGING	CEMTEC 190 SP is delivered in 210 ltr. drums, 1000 ltrs containers or in 10,000 ltr. bulk tanks.
COLOR	Contact CMCI Tech Dept.

## TECHNICAL INFORMATION

Typical Engineering Data : the following results were developed under laboratory conditions. Mix Design

Cement content ( opc ) - 307 kg/m<sup>3</sup>

Coarser aggregate - 64 %

Finer aggregate - 36%

## ENGINEER'S SPECIFICATION.

Concrete shall be designed in a accordance with ACI Standard Recommended Practice for selecting proportions for concrete (ACI 211). The super plasticizer admixture shall comply with ASTM Designation C-494 type A and F admixture and shall be **CEMTEC -190 SP** as manufactured by Construction Material Chemical Industries or one proved to be equivalent. It shall be used in strict accordance with the manufacturer recommendations

## COMPRESSIVE STRENGTH:

Age	Specification (% of Control)	Control	Cemtec-190 SP mix (% of control)
1 day	140	100	145
3 days	125	100	135
7 days	115	100	133
28 days	110	100	13

### Quality Statement

CMCI manufactures its products at their manufacturing facility in Saudi Arabia as per the Quality Procedures certified to conform with quality Management System described in ISO 9000 series

CMCI provides a comprehensive technical support system for its full range of high performance construction products CMCI also offers full technical field support to consultants, Architects, contractors, applicators and End Users.

"High Quality Construction Chemicals"  
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The Technical Specification information and recommendations given are based on the current technical knowledge and the user or his representative is recommended to check the suitability of the product CMCI reserves the right to amend the technical characteristic of the product as part of ongoing research and development. As the work execution is beyond the direct and continuous control of CMCI no guaranty and or responsibility is assumed on the performance of work completion executed with use of our products.