

# CEMTEC 504 TP

## HIGH SLUMP RETENTION AND RETARDING SUPER PLASTICIZER

**CEMTEC 504 TP** is a high range water reducing, high slump retaining and retarding super plasticizing admixture. Slump retention properties specially designed for long distance transportation and discharge of self leveling ready-mixed concrete applications.

### PRIMARY APPLICATIONS

- Ready-Mix concrete
- Reinforced concrete
- Industrial slabs
- High strength concrete
- Pre stressed concrete
- Parking structures
- Water tight concrete

### FEATURES / BENEFITS

- Self leveling concrete with out increasing water content
- High strength concrete at low water cement ratio
- Concrete with **CEMTEC 504 TP** maintains the self leveling properties form 2- 4 hours at ambient temperature
- Greatly reduces water requirements
- Reduces segregation and bleeding in the plastic concrete
- Reduces cracking and permeability of hardened concrete
- When used to produce “flowing” concrete, significantly reduces concrete placement time and cost

### SPECIFICATIONS / COMPLIANCES

**CEMTEC 504 TP** meets or exceeds the ASTM C-494 TYPE D AND G requirements.

### PACKING

**CEMTEC 504 TP** is available in 210 ltr drums, 1000 ltr.container and 10'000 ltr tanks.

### TECHNICAL INFORMATION

Typical Engineering Data

The following results were developed under laboratory conditions:

Color : Dark Brown Liquid  
Specific Gravity : 1.22 at 25 deg C  
Chloride Content : Nil

Mix Design :  
Cement content : 400 kg/m<sup>3</sup>  
Coarser aggregate : 60 %  
Finer aggregate : 40 %

### Compressive Strength vs. Control

1 day - Up to 140 %  
3 day's - 140 -160 %  
7 day's - 130 -150 %  
28 day's - 125- 135 %

### DIRECTION FOR USE

The normal addition rate of **CEMTEC 504 TP** is 0.60 ltrs to 1.5 ltrs per 100 kgs of cement. However, dosage can be increased to 2.00 - 2.50 liters per 100 kgs of cement and W/C ratio can be reduced to around 0.32 if a very high early strength concrete is required. When **CEMTEC 504** added at a rate of 750 ml per 100 kg cement to a 75 mm slump concrete, it will produce flowable concrete with a slump of 170 - 200 mm. The slump loss will be gradual up to 4 hours at a temperature of 40°C when **CEMTEC 504 TP** is used in specified proportions. Variation in slump loss and setting characteristics are a function of the amount of admixture used, cement characteristics and the mix design selected. An increase in concrete temperature will cause an increase in slump loss and decrease in initial set time. In order to have better slump retention it is advised to have a more than 200 mm of initial slump. When designing mixes for use with **CEMTEC 504 TP**, ACI 211.1 and ACI 211.2 recommendation should be followed. After the initial mix is established the sand to coarse aggregate ratio may be adjusted to maintain homogeneity of the “flowing” concrete mix.

### PRECAUTION / LIMITATIONS

The use of **CEMTEC 504 TP** varies with every application. Therefore, Technical Department of CMCI should be consulted whenever a question on usage or compatibility with any other admixture is raised. Many successful mix design are on file and can be an excellent reference when preparing a project mix design. Severe retardation of setting time would be observed at high dosage and at lower ambient temperatures.

*“High Quality Construction Chemicals”*

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#### QUALITY STATEMENT

CMCI manufacture 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

The Technical Specification information and recommendation 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.