

# CEMTEC A1

## SUPER PLASTICIZER TYPE F

### DESCRIPTION

**CEMTEC A1 SUPER PLASTICIZER** is based on melamine for use as a concrete admixture for various types of construction applications.

**CEMTEC A1 SUPER PLASTICIZER** acts as a powerful dispersing agent for cement particles which normally agglomerate. **CEMTEC A1** is a clear liquid.

The result of using **CEMTEC A1** is that it provides **FLOWING CONCRETE** and in addition the strength is increased by the reduction of water content.

### SPECIFICATIONS:

**CEMTEC A1** complies with B.S. 5075 and ASTM C 494 Type F.

### PHYSICAL PROPERTIES

Calcium chloride contents	- Nil
Air Entrainment	- Nil
Specific Gravity	- 1.12 at 20° C

### Minimal Shrinkage :

Self Levelling concrete or **FLOWING Concrete** is easily achieved by using **CEMTEC A1**. It does not have the disadvantages of concrete which has been plasticized by increasing the amount of cement paste or water, therefore reducing shrinkage cracking. Where **CEMTEC A1** is used, shrinkage and cracking is greatly reduced.

### ADVANTAGES

- Workability improves workability, handling and general placement in congested reinforcement.
- Increased strength exhibits higher strength without any additional cement and retains excellent workability.
- High Quality exhibits denser textured concrete for high durability with bleeding and segregation reduced to minimum.
- Self Levelling **CEMTEC A1 SUPER PLASTICIZER** provides virtual self leveling and in addition, requires only a minimum amount of compaction.
- Water Reduction: Utilizing **CEMTEC A1** facilitates a large reduction in water content without any effect on the workability of the concrete.

### COMPATIBILITY:

**CEMTEC A1 SUPER PLASTICIZER** is compatible for use with all types of Portland Cement.

### COMPRESSIVE STRENGTH

SEE TABLE - HIGH EARLY STRENGTH.

### WORKABILITY

The addition of **CEMTEC A1 SUPER PLASTICIZER** without reduction in the water content and with only minor mix redesign produces "Collapsed slump concrete" with a flow table value within the range 51- 62 cm which will flow to fill formwork completely and produce denser hardened concrete, without decrease in compressive strength.

The flowability properties of the concrete last approx. 50 - 60 minutes depending on job site conditions. After this time, the concrete will exhibit normal behavior as it would without addition.

### DIRECTIONS FOR USE

#### Dosage:

the correct dosage should be determined by controlled / laboratory tests with a concrete mix design to establish and or check the mix design flowing properties. A further site trial mix should be initiated and if necessary, a final mix adjustment can be made.

- Free flowing concrete - no water reduction 1.35 - 1.70 ltr per 100 kg cement.
- For high strength concrete with water reduction 1 - 4 ltr. per 100 kg cement.

#### Over Dosage

Should over dosage occur, the concrete will exhibit slight retardation. However, final strength and properties of the concrete will not be affected.

### RESULTS FOR HIGH EARLY STRENGTH

Mix	CEMTEC A1 PLASTICIZER LTR/100KG CEMENT	Slump mm	W/C	Compressive Strength at 24 hrs PSI	% Increase over control
Control	NIL	34	0.41	4060	-
Cemtec A1	2.5	33	0.34	5365	32
Cemtec A1	3	33	0.31	6235	53

#### **DISPENSING :**

We suggest that in order to achieve the correct quantity of **CEMTEC A1**, an approved type of Dispenser should be utilized.

**CEMTECA1** should be added after all the concrete ingredients have been mixed thoroughly. Once mixed, dispense concrete immediately. For ready mix concrete, it is recommended that **CEMTECA1** should be added on site and the concrete re-mixed prior to placing. 2 - 3 minutes of mixing at maximum revolutions is normally sufficient.

#### **PACKAGING:**

1000 ltrs. containers, 210 ltr drums and 20 ltr pails.

#### **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.