CEMTARD-17

WATER-REDUCING PLASTICIZING AND SET-RETARDING ADMIXTURE FOR CONCRETE (ASTM C-494 TYPE B & D)

DESCRIPTION

CEMTARD-17 admixture is a ready-to-use aqueous solution of hydroxylated organic compounds. Ingredients are factory premixed in exact proportions to minimize handling, eliminating mistakes and guesswork. It contains no chlorides and its specific gravity is 1.22.

FEATURES & ADVANTAGES:

CEMTARD-17 Is designed to produce a higher compressive flexural and tensile strength in concretes, through water reduction (typically 8 to 10%) and through hydration control of the tricalcium silicate (C3S) phase of the Portland cement. This water reducing action of CEMTARD - 17 produces greater plasticity and workability in the fresh concrete, as well as improved impermeability and reduced shrinkage in the hardened concrete.

CEMTARD-17 is used wherever a delay in setting may be required to ensure sufficient time for delivery, placement, vibration or compaction. This may be particularly important for :

- HOT WEATHER CONCRETING where delayed set will ensure sufficient placement time and improve concrete quality.
- TRANSIT MIX CONCRETE to extend setting time on long hauls.
- BRIDGE DECKS and large slabs where **CEMTARD-17** extends plastic characteristics of the concrete until progressive deflection resulting from increased loads is complete. This may eliminate the necessity for cold joints.

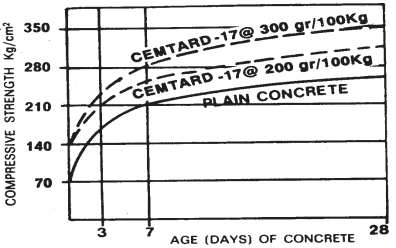
ADDITION RATES:

Addition rates for **CEMTARD-17** range from 0.17ltr. to 0.35Ltr./100kgs of cement.The amount to be used will depend upon degree of retardation required and temperatures under job conditions. For normal use, 0.2 ltr/100 kgs. of cement will prove adequate. Longer setting time or higher temperature will require higher addition rates.Conversely, the addition rate will be lower for shorter retardation. Trail mixes are recommended to determine optimum addition rates of **CEMTARD-17** with available concrete materials and job conditions

SPECIAL APPLICATIONS:

CEMTARD-17 is also used in applications such as:

- **STRUCTURAL AND PRECAST CONCRETE.** Rapid strength development after delayed initialset permits earlier removal of formwork. With **CEMTARD-17** usage 28-days concrete compressive strength of non-admixtured concrete can be obtained within 14 days or even 7 days without changing the mix design. Similarly, 7 days concrete compressive strength of plain concrete is reached within 3 days by adding CEMTARD-17 to the mix (see figure 1)

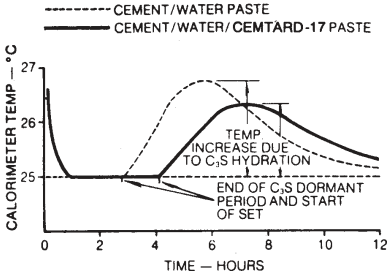


CEMTARD -17
THE EFFECT OF INCREASED ADDITION RATES ON STRENGTH: FIGURE 1

- **PRESTRESSED CONCRETE** Where 28-days compressive strengths in excess of 46.5 N/mm2 (6500 Psi) are usually required and also where added time is necessary to properly vibrate and compact long beds and large cross sections. Note that **CEMTARD-17** while not reducing the total heat of hydration developed during the reaction of cement and water, does have a marked effect on the rate of heat evolution. Figure2 illustrates the typical influence of **CEMTARD-17** on the rate of heat of hydration developmentand dissipation.

CEMTARD-17
EFFECT OF DEVELOPMENT OF HYDRATION FIGURE 2

COVERAGE	Contact CMCI Tech Dept
PACKAGING	CEMTARD-17 is available in 1000 ltr. containers 10,000 ltr. tanks and in 210 ltr. drums. It contains no flammable ingredients
COLOR	Contact CMCI Tech Dept.



COMPATIBILITY WITH OTHER ADMIXTURES

CEMTARD-17 is compatible in concrete with all commercial air-entraining admixtures.
EACH ADMIXTURE SHOULD BE ADDED SEPARATELY.

DISPENSING EQUIPMENT:

A complete line of accurate, automatic dispensing equipment is available to suit all types of concrete batching plants
CEMTARD-17 may be introduced to the mix with the water.

TECHNICAL INFORMATION

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

Cement content (opc) - 307 kg/m3
Coarser aggregate - 64 %
Finer aggregate - 36%

COMPRESSIVE STRENGTH

Age	Specifictation Control (% of Control)	CEMTARD-17 mix (% of control)
3 days min 110	100	121
7 days min 110	100	117
7 days min 110	100	117

ENGINEER'S SPECIFICATION

Concrete shall be designed in accordance with ACI Standard Recommended Practice for Selecting Proportions for Concrete ACI 211. The water reducing set-retarding admixture shall comply with ASTM Designation C-494 Type B and D admixture and shall be **CEMTARD-17** as manufactured by CMCI or one proved to be equivalent

It shall be used in strict accordance with the manufacturer's recommendations. The addition rate shall be adjusted to produce the specified retardation of the concrete mix at temperature prevailing at the site.

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

CMCI provides a comprehensive technical support system for its full range of high erformance 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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