



ISO 9001:2000

CICO PLAST-MMF

Superplasticiser/High Range Water Reducing Admixture

DESCRIPTION : CICO PLAST-MMF is a high range water reducing admixture based on modified polycondensate of melamine and formaldehyde. It is a brown liquid and gets dispersed immediately in concrete mix together with water. It conforms to ASTM-494 Type F

USES : CICO PLAST-MMF can be used together produce an extremely workable FLOWING CONCRETE without loss of strength or to enable large water reduction to be made for the same workability resulting in dense concrete with higher ultimate strength. This product is quite helpful in producing pumpable concrete, precast concrete, and prestressed concrete, industrial/ commercial flooring with floor toppings and in areas where early shutter stripping are required

TABLE-1 Test Results for Early Shutter Stripping Usage
CICO PLAST-MMF

Sl. No.	Test	Dosage in Lt/50kg of cement	W/C	Cement content in kg/m ³	Slump in mm	Compressive strength in kg/cm ²			
						1day	3 day	7 days	28 days
1	Control Mix		0.55	400	100	82	140	243	342
2.	With CICO PLAST-MMF	0.3	0.50	400	115	116	245	340	405

Laboratory Temp.28°C and RH - 70 ± 5%

NOTE: The above results are intended only as a guide and as such is suggested in good faith. It is based on our laboratory experience using cement, aggregates available locally. Type of cement aggregates from other sources can produce different results. Therefore it is recommended that site trials are essential to determine optimum suitability for proposed application.

ADVANTAGES :

- * Substantial improvements in workability and flow properties without increased water produces self leveling concrete which can be poured into place around congested reinforcement and requires little(or no) vibration to achieve optimum compaction. The bond strength of concrete to reinforcement steel is considerably increased.
- * The internal friction and thixotropy of the mix is reduced to a minimum without the risk of segregation, thus making concrete pumping more efficient.
- * Very significant water reduction minimises shrinkage cracking thereby producing close textured impervious concrete with improved durability and surface finish. Suitable for use in most types of concrete above and below ground subjected to water pressure and aggressive atmospheric conditions. Reduction in concrete permeability, protects against water migration and corrosion of embedded steel.
- * For a given concrete mix, keeping the cement consumption and workability constant by large reduction in the amount of mixing water, substantial increase in strength can be achieved. Alternatively, for the same concrete mix, by keeping the workability and strength constant, a definite cement economy ranging from 15 to 25% can be obtained. Obvious advantages for precast concrete production.

PROPERTIES

- Form : Liquid
Colour : Brown
Specific Gravity : 1.20 ± 0.02
Air Entrainment : May increase very marginally
Setting & Hardening : There may be retarding effect on the setting time
Chloride Content : Nil
Compatibility : Can be used with all types of Portland and slag cements including sulphate resisting cement
pH Value : 7 ± 1
Consistency : **CICO PLAST-MMF** is formulated from carefully selected raw materials and is manufactured under control conditions to give a consistent product.
Handling : **CICO PLAST-MMF** is formulated from chemicals which present no fire or health hazards.
Storage : If stored in unopened containers at normal ambient temperatures, a shelf-life of approximately 12 months could be expected.

METHOD OF USE

- : **CICO PLAST-MMF** is supplied ready for use. For maximum dispersion throughout the mix measured quantity of **CICO PLAST-MMF** should be added directly into the mixer at the same time as the mixing water. On no account should be added to the dry cement.

RATE OF ADDITION

- : The optimum dosage should be determined by site trials with the particular concrete mix. As a guide the rate of addition is generally in the range of : 200 to 1000ml per 50 kg of cement depending on the function.

	Function	Dosage
1.	As superplasticiser-for flowing concrete	200 to 600 ml per 50 kg of cement
2.	As high range water reducing admixture for high strength concrete (with large water reduction)	300 to 1000 ml per 50 kg of cement

PACKING

- : **CICO PLAST-MMF** is available in 20 and 200 Litre/240 Kg plastic/metal container.

PRODUCT INFORMATION

Although the basic formulation of our products generally remains unchanged production refinements arising from continuing research and evaluation program may occasionally result in marginal changes in properties.

TECHNICAL SERVICE

- * **CICO** maintains a technical division with highly qualified Technical Personnel to investigate and advise on subjects related to concrete and the construction industry. The Division will advise on the correct use and selection of right products at the right place.
- * **CICO** undertakes Consultancy Service for diagnosis and rehabilitation of distressed structures
- * **CICO** undertakes jobs as a package for total waterproofing system with guarantee

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