

MIXFLOW UP700

Ultra-plasticizer for high strength & durable concrete

Mixflow UP700 is chloride free, liquid concrete admixture based on super modifications on polycarboxylic ether for applications in ready-mix and pre-cast industries where highest durability and performance is achieved

Appropriation

PSC, Ready-mix and site batched concrete

Pre-cast concrete

Applications where low WC ratio has to be maintained

In self-compacting mixes

High slump, super performance concrete

Long haul and hot weather concreting

High workability combined with exceptional pumping and flowing properties are required

Characteristics

Very powerful plasticizing action thus eliminating the need for compaction

Excellent workability retention and control of initial set for hot weather concreting

Chloride free and conflict carbonation, suitable for RC & PSC

Designed for use with low WC ratio and early high ultimate strength concrete

Improved workability without increasing water contents, loss of cohesion

Dwindling of creep and shrinkage

Compatibility: All type of cements including SRC; cement replacements like Micro silica, Flyash etc.

Technical Data & Properties

Standard conforms: ASTM Type B, D & G

Appearance: Light brown/ yellowish liquid

Specific gravity: 1.20 at 25 °C

Air entrainment: 1% to 2% according to dosage rate used

Chloride content: Nil, tested to BS 5075

Freezing point: 0°C. Mix prior to use

Flash point: None

Product Management

Dosage rates: Laboratory trials followed by site trials should always be conducted to determine the optimum dosage rates of Mixflow UP700. Dosage will vary according to use and mix design, low permeability, micro-silica concrete, water reduced high strength concrete or flowing concrete.

As a general guide, an addition of between 300ml and 1200ml/ 100kg of cement will produce the Ultra-plasticizing results from an initial slump of 175 mm to 250 mm. Dosage up to 1400ml/ 100kg of cement may be required dependent on mix design. When used on its own as an Ultra-plasticizer and to provide workability retention, higher dosages will be required. Alternatively, lower dosages may be used and Mixflow PR30 may be added (280 ml to 450ml/ 100kg of cement)

Setting times: Mixflow UP700 acts efficiently on the cement particles to give controlled retardation of initial set. Setting times will vary according to fineness and type of cement and also concrete temperature. Delayed setting time is beneficial as they prevent the possibility of cold joints occurring

Mixing: Mixflow UP700 should be added to the mix during the mixing cycle. It may be added with the gauged water or after water has been added. Never add Mixflow UP700 to dry cement, dry micro-silica or dry aggregates, as performance is lost in aggregate absorption and non-homogeneity. No extension to normal mixing time is required. Alternatively, Mixflow UP700 may be added directly to the mixer truck via the feed hopper whilst at site. Workability can be increased, controls and delays to initial set affected thus. This may be required during hot weather concreting or when long haulage routes are being used. Ensure thorough mixing before discharge. Mixflow UP700 should be dispensed through proprietary dispensers in the batching plant or alternatively via controlled measures at site

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Mixflow UP700 should not be mixed with any other admixtures. Admixtures being used in the same concrete mix must be dispensed separately and trials must be carried out to determine performance

Effects of over dosage: Dosage rates of Mixflow UP700 higher than specified will result

Increased workability

Slight increase in air entrainment

Retardation of initial and final set

Provided the concrete is properly cured, the ultimate strength will not be adversely affected and will usually be higher than for normal concrete. Early compressive strengths will however be lower than expected. It is important to ascertain the reasons for the over dosage to avoid repetition

Packing & Storage

Mixflow UP700 is available in 20 litres and 210 litres drums. For site installations or mass consumptions, deliveries shall be made in bulk custom-designed containers. Should be stored in cool, shaded and dry warehouses, similar to cement. Shelf life is 12 months when stored under cover, out of direct sunlight, protected from extreme temperatures and as per recommendations. In extreme tropical climate, the product must be stored in cooled ambience. Excessive humidity and over exposure to UV will result in the reduction of shelf life

Health & Safety

Mixflow UP700 contains no poisonous substance. As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles shall be worn whilst handling. Wearing long sleeve overall, safety shoes and face mask is recommended for maximum safety. Reseal all containers after use and ensure product is stored as instructed on the safety section of the labeling. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately. For more details, please refer to the MSDS released on each PyChem product

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THE CONSTRUCTION CHEMIST

Technical information given in this datasheet is true and exact to the best of our knowledge, laboratory upshot and hands-on application. The datasheets of all products are revised/updated regularly and hence ensure that the latest release is used for reference and recommendation. The date of the publishing is as in this sheet. All data are mean of numerous tests, assessment and analysis conducted under laboratory ambience. Climatic disparity in temperature, humidity, etc. and porosity of substrate may impinge on the values.

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