PC Ultra

Product Description

PC Ultra Superplasticiser is a high range water-reducing admixture for high strength concrete.PC Ultra is based on a synthetic carboxylated polymer and is manufactured under closely controlled conditions to give a consistent product. It contains no added chloride.

PC Ultra is comply with ASTM C 494, Type F& G material and BS 5075, Part III.

Features and benefits

- Highly efficient, producing high slump concrete at low dosage with no loss in strength.
- Can added to concrete mix water for rapid batching.
- Plastic, Fluid and Flow concrete with PC Ultra exhibits high cohesion.
- Concrete with PC Ultra will maintain slump properties in excess of two hours, even at high ambient temperatures.
- Addition of PC Ultra to plain concrete will allows water reduction of up to 35%.
- Low water/cement ratio leads to excellent durability of concrete.
- Good surface finish, providing highly aesthetic concrete appearance.

Typical use

PC Ultra has been developed to allow concrete to attain particularly high performance in both the plastic and the hardened states. It is particularly useful for imparting exceptional workability characteristics to concrete mixes, so that large or difficult pours can be made, whilst maintaining excellent slump retention properties especially in hot climatic conditions.

PC Ultra also allows flowable concrete to be produced with very low water/cement ratios to achieve higher strengths.

Product Data

Packaging size	20 ,200, 1000 Liter
Form	Liquid
Colors	Clear Pale Yellow
Specific Gravity	0.98-1.10±0.02 @25Cº
PH	5-6
Chloride Content	Nil

Application data

Compatibility:

With cements: PC Ultra can be used with all types of Portland Cements, including Sulphate Resisting Cements.

With other admixtures: PC Ultra is fully compatible with other products normally used in concrete including air entraining agents, retarders or accelerators, silica fume admixtures, Shrinkage Reducing Admixture, Corrosion Inhibitor without impeding their performance.

PC Ultra should not be used in combination with NSFC and MSFC superplasticisers. Most Type A water reducers or Type D water reducing retarders are compatible with PC Ultra as long as they are separately added to the concrete. Caution should be exercised when using PC Ultra together with a retarder, as excessive retardation can occur if the admixture dosages are too high. Pretesting of the concrete should be performed to optimize dosages and addition times of these admixtures.

Method of Use

PC Ultra is supplied ready for use. When producing high workability concrete it can be added in its supplied form to the batching water, prior to the addition of the cementitious component.

After the addition of cement, a further mixing cycle of at least 2 minutes is recommended to enable PC Ultra to efficiently disperse the mix components.

Addition Rates

Range : (0.7% - 2% [w/w] by weight of cement). Addition rates of PC Ultra can vary with the type of application. As with most products of this type, the magnitude of the effect obtained with PC Ultra is governed by the quantity of product used and the specific nature of the concrete and its constituent materials.

It is necessary, therefore, to assess performance under site conditions using site materials to determine optimum dosage and effect on both plastic and hardened concrete properties, such as cohesiveness, workability retention, set characteristics, early rate of strength gain, ultimate compressive strength and shrinkage when these are of consequence.

As a guide to these trials, an addition level of 0.9% -1.2% PC Ultra/weight of cement is recommended.

Effects of Overdosing

The effects of over dosing PC Ultra are a function of the degree of over dose. When producing high workability concrete, over dosing will increase the level of workability and may induce the onset of segregation.

Depending on the extent of the over dose, an increase in the setting time will also occur, especially in low temperatures and/or when employing sulphate resisting cement or cement replacement materials.

Storage

Store in cool, dry place in a well-sealed container away from direct sunlight for 12 months

Health and safety

Possible Hazards: it causes irritation in case of skin contact & eye contact, flush immediately with plenty of water for at least 10 minutes and seek medical advice in case it happened.