

# COSTARMIX 600DG

Fourth Generation (PCE) High Performance Concrete Pumping Superplasticizer



## PRODUCT DESCRIPTION

COSTARMIX 600DG is an exceptional and Advanced superplasticizer, comprising a unique blend of polycarboxylic ether-based polymers. It is meticulously formulated for high-performance concrete, aiming to enhance workability, durability, and reduce permeability. This cutting-edge plasticizer empowers the concrete with improved initial and final strength. The permeability-reducing properties of COSTARMIX 600DG are noteworthy. Minimizing the permeability of concrete is vital as it helps to prevent the ingress of harmful substances and moisture, which can otherwise lead to the deterioration of the concrete and the embedded reinforcement.

## FEATURES

- Reduces the need for job site adjustment of slump and workability.
- Reduced dimensions of long-term shrinkage and creep. Also minimizes risk of segregation and bleeding
- Improved workability and pumping properties
- Suitable for pre-stressing
- Increased compressive and flexural strength of the concrete both at early and final stage.
- Protection of reinforcement steel against detrimental water-borne attack.
- Reduces / eliminates the high energy requirements of external heat for accelerated curing.
- Provides perfect slump retention at hot climates.
- About 35 - 40% water reduction, compared with Reference mix.

## USES

- Costarmix 600DG is used in the production of highperformance precast and pre-stressed concrete

by reducing significant amount of water.

- Used to achieve high strength with improved workability and reduced w/c ratio.
- Long distance transportation of concrete.
- Costarmix 600DG is used in all concrete works where good workability and increased waterproofing properties are required such as sea walls, swimming pools, tunnels, bridges etc.
- Used in production of concrete with extremely workable characteristics referred to as high slump.
- Hot weather concreting.

## DOSAGE

Typical dosage for Costarmix 600DG is within the range 0.6 - 1.2 % by weight of cement.

## EFFECT OF OVERDOSAGE

A dosage above the recommended level of admixture may result in high workability, slight increase in air entrainment and retardation of setting time. The ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete if properly placed and cured.

## DISPENSING

The measured quantity of Costarmix 600DG should be added along with the gauging water. For best results, add Costarmix 600DG in the last phase after pre-wetting the mix with 80% of the total water required.

## SPILLAGES

- Spillages of product should be absorbed onto sand, earth or vermiculite and transferred to suitable containers.
- Remnants should be hosed down with large quantities of water.

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## TECHNICAL PROPERTIES

<b>Packaging</b>	20L, 210L, 1000L
<b>Appearance</b>	Transparent Liquid
<b>Shelf life</b>	12 months minimum from production Date
<b>Density</b>	1.1 + 0.02kg/litre
<b>PH</b>	7.0 ± 1
<b>Water reduction</b>	> 35 – 40% compared with Reference mix
<b>Compressive Strength</b>	Fulfilled (based on concrete mixed design)
<b>Air Content</b>	Fulfilled
<b>Corrosion behavior</b>	Component were selected according to EN934-1: Annex A.1
<b>Retention of consistence</b>	At 1 hr > Reference mix at initial
<b>Recommended dosage</b>	Usual dosage: 0.8 - 1.5 % by weight of cement. It is advisable to carry out trial mix to establish the exact dosage rate required
<b>Chloride content</b>	Nil as per BS 5075
<b>Air entrainment</b>	Less than 2% as per ISO 9103

## LIMITATIONS

Adequate Trials should be carried out with relevant materials and conditions in order to ascertain the best mix design and admixture dosage to meet specific requirements.

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## SHELF LIFE

Shelf life is 12 months provided the temperature is kept within the range of 5°C to 50°C.

## STANDARD COMPLIANCE

Conforms to the requirement of ASTM C 494 Type G, ASTM C1017

## HEALTH & SAFETY

- Please ensure that hand gloves and goggles are worn during installation
- Apply in ventilated areas, away from flames
- It is only important that during application and after application, standard safety procedures are done.
- Please consult current MSDS for product.
- *For Professional Use only.*

## ADDITIONAL INFORMATION

Costarchem manufactures a complete range of construction chemical products which include:

- Concrete admixtures
- Waterproofing system
- Flooring system
- Cementitious and epoxy precision grouts
- Damp-proofing products
- Sealants and adhesives
- Repair and refurbishment systems

For more information on any of our products, please contact Costarchem global or regional office.

## LEGAL NOTE

The information and recommendations relating to the application of Costarchem products, are given in good faith based on current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with the stated recommendations in the product datasheets. Whilst Costarchem endeavors to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it. The user of the product must test the product's suitability for the intended application and purpose. Costarchem reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

