



KUT PLAST PC 51

**A High Performance Concrete Superplasticiser
Based on Modified Polycarboxylic Ether
ADM – 23 - 0104**

DESCRIPTION

KUT PLAST PC 51 has been primarily developed for applications in the ready mixed and precast concrete industries where the highest durability and performance is required.

Super plasticizing action of **KUT PLAST PC 51** is different than conventional super plasticizers based on sulfonated melamine and naphthalene formaldehyde condensate, which create electrostatic repulsion of particles. **KUT PLAST PC 51** initially create the same electrostatic repulsion and further stabilizers the mixes due to static repulsion of long lateral chains linked to the polymer backbone.

USES

The excellent dispersion properties of **KUT PLAST PC 51** make it the ideal admixture for precast and readymixed concrete where low water cement ratios are required. This property allows the production of very high early and high ultimate strength concrete with minimal voids and therefore optimum density. Due to the strength development characteristics the elimination or reduction of steam curing in precast works be considered as an economical option.

ADVANTAGES

During mixing and placement

- High workability without segregation or bleeding
- Less vibration required
- Can be placed and compacted in congested reinforcement
- Reduced labour requirement
- Improved surface finish
- Chloride free
- **Effect on hardened concrete properties**
- Increased early and ultimate compressive strengths
- Increased flexural strength
- Higher E modulus
- Improved adhesion to reinforcing and stressing steel
- Better resistance to carbonation
- Lower permeability
- Better resistance to aggressive atmospheric conditions
- Reduced shrinkage and creep
- Increased durability

STANDARDS

KUT PLAST PC 51 is free from chlorides and complies with **ASTM C494 Types A and F**.

TYPICAL PROPERTIES

Calcium chloride Content : Nil

Specific gravity : 1.20 to 20 °C

Air entrainment : Less than 1% additional air is entrained.

Setting time : No retardation at normal dosage.

Chloride content : Nil to **BS 5075**

COMPATIBILITY

KUT PLAST PC 51 is compatible with all Portland cements that meet recognized international standards.

KUT PLAST PC 51 must not be used in conjunction with any other admixture unless prior approval is received from the **ASPEC** Technical Department.

KUT PLAST PC 51 is suitable for mixes containing:

- Microsilica
- Pulverised fuel ash
- Ground granulated blast furnace slag cement

INSTRUCTIONS FOR USE

KUT PLAST PC 51 is a ready to use admixture that is added to the concrete at the time of batching.

The maximum effect is achieved when the **KUT PLAST PC 51** is added after the addition of 50 % to 70 % of the water.

KUT PLAST PC 51 must not be added to the dry materials.

Thorough mixing is essential and a minimum mixing cycle, after the addition of the **KUT PLAST PC 51**, of 60 seconds for forced action mixers is recommended.

Dosage: The normal dosage for **KUT PLAST PC 51** is between 0.5 and 0.8 litres per 100 kg of cement (cementitious material).

Dosages outside this range are permissible subject to trial mixes.



**Specialities Construction
Chemicals Factory**



TECHNICAL SUPPORT

'ASPEC' provides technical support service on mix design, admixture selection, evaluation of trials, dispensing equipment etc. Please contact the Technical Department in these cases.

Curing: As with all structural concrete, normal curing methods apply.

Cleaning: Spillages of **KUT PLAST PC 51** can be removed with water.

PACKAGING

KUT PLAST PC 51 is available in 210 litre drums and in bulk tanks upon request

STORAGE

KUT PLAST PC 51 should be protected from extremes of temperature. Should the material become frozen, it must be completely thawed and thoroughly mixed before use. **KUT PLAST PC 51** has a minimum shelf life of 12 months provided temperature is kept within the range 5 °C to 30 °C.

PRECAUTIONS

HEALTH & SAFETY

KUT PLAST PC 51 is non-toxic. Any splashes to the skin should be washed immediately with water. Splashes to the eyes should be washed immediately with water and medical advice should be sought.

Fire: **KUT PLAST PC 51** is non flammable.

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Distributor: