



# KEM SUPLAST PCE 100

**Polycarboxylic ether (PCE) based, high range Superplastering admixture for concrete**

**Ref. CA/SP-V1-0212**

## Description

KEM SUPLAST PCE 100 is an admixture of a new generation based on modified polycarboxylic ether. The product has been primarily developed for applications in high performance concrete where the highest durability and performance is required. It is free of chloride & low alkali. It is compatible with all types of cements.

## Uses

- High early and ultimate strength concrete
- High performance concrete.
- Production of controlled rheology concrete
- For attaining high workability without segregation or bleeding
- Precast & Pre-stressed concrete
- Concrete containing pozzolans such as microsilica,, GGBFS, PFA as well as high volume fly ash concrete

## Advantages

- Increase in early & ultimate strengths, higher E-modulus, improved adhesion to reinforcing and stressing steel.
- Better resistance to carbonation and other aggressive atmospheric conditions
- Lower permeability - increased durability
- Reduced shrinkage and creep
- Elimination of vibration and reduced labour cost in placing.

## Typical Properties

**Appearance** : Light brown liquid

**Relative Density** :  $1.10 \pm 0.02$  at 25°C

**pH** : >6

**Chloride ion content:** < 0.2%

## Standards

ASTM C494 Types F

ASTM C – 1017 Type I

IS 9103: 1999

## Direction for use

It is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticizing effect and water reduction are higher if the admixture is added to the damp concrete after 70 to 90% of the mixing water has been added. The addition of KEM SUPLAST PCE 100 to dry aggregate or cement is not recommended.

Thorough mixing is essential and a minimum mixing cycle, after the addition of the KEM SUPLAST PCE 100 VM, of 60 seconds for forced action mixers is recommended.

## Dosage

Optimum dosage of KEM SUPLAST PCE 100 should be determined by carrying out trial mixes, using local materials. As a guide, a dosage range of 500gm to 1000 gm per 100kg of cementitious material is normally recommended. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact our local sales representative.

## Effects of over dosage

A severe over-dosage of KEM SUPLAST PCE 100 may result in,

- Extended initial and final set
- Bleed/segregation of mix and quick loss of workability.
- Increased plastic shrinkage

A slight overdosing may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured.



## Compatibility

KEM SUPLAST PCE 100 is compatible with Microsilica, Fly Ash and GGBS. It must not be used in conjunction with any other admixture unless prior approval is received from Chembond Technical Department.

## Corrosivity – Non Corrosive

KEM SUPLAST PCE 100 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems.

## Workability

KEM SUPLAST PCE 100 ensures that rheoplastic concrete remains workable in excess of 30 minutes at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability.

## Curing

Normal Concrete curing practices shall be followed. It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

## Packaging

KEM SUPLAST PCE 100 is supplied in 225 kg drums or in bulk on request.

## Storage and Shelf life

KEM SUPLAST PCE 100 must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature. Keep containers closed when not in use.

Shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

## Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

## Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet.

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