

# PC-P

ASTM C 494, Type F

Polycarboxylate Superplasticizer(Powder)



## Description

PC-P is a high performance, 100% polycarboxylate based polymer, specifically developed as an effective dispersant, fluidifier and high range water reducing agent for concrete and other mineral materials. PC-P is a neutral concentrate grade, it is mainly used as a raw material to produce different types of high performance water reducers for targeted industrial. It complies with ASTM C 494, Type F specifications.

## Uses

PC-P is a plant-added superplasticizer that is formulated to impart improved workability to the concrete and to achieve high early compressive strength as required by the precast industry.

PC-P can be applied in a wide variety industry, such as the production of self-consolidating concrete in precast industry, conventional concrete production industry even with low water/cement ratios while maintaining normal levels of workability and so on.

## Advantages

1. Produces concrete with high levels of workability without segregation.
2. Provides significantly higher strengths and normal set time.
3. Has excellent concrete rheology and handling properties.
4. Provides improved finish ability and surface finishes.
5. Has superior air entrainment control.
6. Provides standard water reduction at normal addition rates and significant water reduction at higher addition rates.
7. Has no chloride ions and non-corrosion to steel bar.
8. Improves the frost resistance and carbonation resistance of the concrete. Lower drying shrinkage of the concrete by 20% or more compared to naphthalene-based admixture.

## Specifications

Items	Specification
Visual Appearance	Light Yellow Powder
Solid Content (%)	98.0±1.0
Density (23°C)(kg/m <sup>3</sup> )	510±10
Chloride Content (%)	≤0.10
Na <sub>2</sub> SO <sub>4</sub> Content (%)	≤4.0
Na <sub>2</sub> O+0.658K <sub>2</sub> O (%)	≤5.0
Solubility	Very Soluble
Performance	Dosages for P.O 42.5 Standard Cement: (wt% of cement)
	0.2±0.02
Cement Paste Flow	≥240
Water Reducing of Mortar	≥20

## Test Data Sheet

Test Items	Specification	
Water Reducing Rate, %	≥25	
Compressive Strength Ratio, %	1 day	≥170
	3 day	≥160
	7 day	≥150
	28 day	≥130
Air Content, %	≤2.0	
Bleeding Ratio, %	≤60	
Shrinkage (28 day), %	≤100	
Setting Time Def., min.	Ini. Fin. -90~+120	
Chloride Penetration, coulomb	≤2000	
F/T Cycles, Time	≥200	
Slump Retention (60min), mm	≥150	

## Cautions

1. When mixing and measuring the slump loss, be aware that it takes longer time to be in effect than naphthalene admixtures.
2. Cannot be added together with rosin soup air entrainer.
3. Cannot be kept in metal container for too long.
4. Do not mixed with naphthalene-based admixtures. If other admixtures, such as set retarder or corrosion-inhibiting admixture, are required simultaneously for some special projects, compatibility tests should be conducted beforehand.

## Package, Storage & Handling

- ◆ For powder: Woven fabric bag with plastic liner. Net weight: 25kg +/- 0.13 kg.
- ◆ Cautions should be taken to prevent packages from being torn by sharp-ended objects while being transferred or delivered. When being contaminated by high humidity or moisture in case of leakage, it can be prepared in prescribed ways for further use without surrendering any effect.
- ◆ It should be stored in a dedicated warehouse that is well-ventilated and dry. It remains effective in one year. After the expiration date, it can be used again if testing results fall within the established range.