Polycarboxylate Superplasticizer (PCE)

High-range water-reducing polycarboxylate superplasticizer for modern concrete admixture systems

GAC-PCE | Concrete Admixture | Superplasticizer | High Range Water Reducer

PRODUCT DESCRIPTION

Polycarboxylate Superplasticizer (PCE) is a dry powdered superplasticizer built on a long polyoxyethylene (PEO) chain with a terminal carboxylic group, synthesized from a modified polyether (SAE-IPEG). It is designed to give the greatest possible water reduction using modern polycarboxylate chemistry, and is free of calcium chloride, nitrates, nitrites, or other potentially corrosive materials.

TYPICAL PHYSICAL & CHEMICAL PROPERTIES

PARAMETER	TYPICAL VALUE
Appearance	**White or yellowish powder**
Solid Content	**98 ± 0.5%**
pH (23°C)	**7 – 10**
Na2SO4	**3.0% max**
Water Content	**3.0% max**
Loss on Ignition	**86% min**
Chloride Ion Content	**0.1% max**
Bulk Density	**500 – 700 kg/m³**
Water Reducing Rate	**25% min**
Fluidity of Cement Paste	**≥ 220 × 0.95**

Values represent typical production results and are provided for reference only; they do not constitute a binding product specification. Please refer to the Certificate of Analysis (COA) accompanying each shipment for batch-specific results.

APPLICATIONS

- High-range water reducer: water-reducing rate 25% min (see table) for ready-mix, precast and high-strength concrete
- Dosage: no fixed dose; set by trial mixes and express it as powder by weight of cementitious material
- Free of calcium chloride, nitrates and nitrites; confirm compatibility with other admixtures in trial mixes
- Allows a lower water-cement ratio for higher strength; results depend on cement, aggregates and mix design
- Slump retention depends on cement, temperature and haul time; check slump over time in trial mixes
- Check air content and adjust the air-entraining admixture (AEA) dosage in trial mixes

PACKAGING, HANDLING & STORAGE

Packaging	**PE-lined plastic woven bag, 25 kg/bag**
Storage	**Store in a cool, dry, well-ventilated area, protected from moisture**
Handling	**Do not combine with PNS-based superplasticizers in the same concrete mixture — causes rapid loss of workability**