Technical Data Sheet

Polycarboxylate Ether Superplasticizer | PCE Powder

Product Description

POLYVIA™ PCE Powder is a powdered polycarboxylate ether superplasticizer for concrete and dry-mix cementitious formulations. Grade selection is based on water-reduction requirements, flow retention, viscosity behavior, early-strength needs and the intended addition process.

Specification

Property	840	850	860	870	ES980	PW888
Grade	High water reduction	Slump Retention	Balanaced Performance	Low viscosity	Early Strength	Early Strength
Appearance	White Powder	White Powder	White Powder	White Powder	White Coarse Powder	White Powder
Solid content, %	≥ 95.0	≥ 95.0	≥ 95.0	≥ 95.0	≥ 98.0	≥ 95.0
Density, kg/m^3	450-650	450-650	450-650	450-650	450-650	450-650
Moisture, %	≤ 5.0	≤ 5.0	≤ 5.0	≤ 5.0	≤ 2.0	≤ 5.0
pH value, 10%wt aqueous solution, 20℃	7.0±1.0	7.0±1.0	7.0±1.0	6.0±1.0	4.0±1.0	6.0±1.0
Chloride, %	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02
Water Reduction Rate, %	≥ 25	≥ 15	≥ 25	≥ 25	≥ 25	≥ 25
Recommended Addition Method	Direct Dry-Mix Addition	Direct Dry-Mix Addition	Direct Dry-Mix Addition	Direct Dry-Mix Addition	Pre-Dissolution	Direct Dry-Mix Addition

Application:

PCE Powder mainly used for factory-produced dry-mix mortars, self-leveling compounds, grouts, ready-mix and precast concrete, UHPC, SCC, shotcrete and PHC spun-pile production. Confirm suitability against cement chemistry, mineral additions, aggregate grading and target performance.

ES980 – Preparation of Liquid PCE

POLYVIA™ PCE ES980 is a coarse-powder, early-strength grade intended for pre-dissolution in water.

Mix ES980 with water at a 1:1 weight ratio to obtain an early-strength PCE solution with approximately 49% theoretical solids content (based on 98% powder solids). Add the powder gradually to water under continuous stirring until fully dissolved.

Dosage:

0.10–0.35% by mass of total cementitious binder. The optimum dosage depends on the grade, binder system, additives and application trials.

Packing & Storage

25kg/Bag, 14MT/20'FCL, 28MT/40GP with pallets

Store in a cool, dry, well-ventilated area. Strictly avoid moisture exposure, as it may cause clumping and affect performance. Protect from direct sunlight and high temperatures (recommended ambient temperature ≤40℃).