

PHANTOM[®]

Water-Reducing Concrete Admixture



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PHANTOM[®] is a water-reducing concrete admixture used at the batching plant or job site to increase flowability. Its retarding and slump-retaining action is intended for lowering the water-to-cement ratio in hot regions and for producing concrete commonly up to the 35 MPa strength class.

Applications

- Concrete up to the 35 MPa strength class in hot weather
- Workability retention for 2 hours at 40°C after batching-plant addition
- Improved pumpability through long pump lines
- Reducing cold-joint risk during prolonged placement
- Tank-wall concrete requiring improved compaction and reduced permeability
- Architectural and exposed concrete with smooth, uniform surfaces
- Beams, columns, shear walls and one-sided walls
- Reduction of cement content by up to 10%

Approvals / Standards

- ASTM C1017 Type II
- ASTM C494 Type D
- ACI 212.3R-16
- INSO 2930

Advantages / Benefits

- Water reduction of 10 to 25% at equal slump
- Strength increase of up to 40% compared with concrete without a plasticizer at equal flowability
- Improved cohesion and plasticity in low-filler or poorly graded concrete
- Improved durability through reduced permeability
- Reduced thermal cracking
- Reduced creep, shrinkage and bleeding

Guideline for Use

At the batching plant, add PHANTOM after the cement, preferably after dilution with part of the mixing water. For truck-mixer addition, assess initial slump, bring concrete to the discharge opening, add PHANTOM onto the concrete, return the load to the drum and mix at high speed for 5 minutes. Recheck slump before discharge and repeat the approved procedure if required.

Dosage

0.5 to 1% by weight of cement. The exact dosage depends on project conditions, required water reduction and required slump. The approved source reports a field example at 40°C using cement content 370, 1.5 kg of PHANTOM and 14 cm initial slump; after 1 hour the slump was 12 cm and the 28-day cylindrical compressive strength exceeded 34 MPa.

Storage

+10°C to +30°C, in dry conditions and away from direct sunlight

Packaging

20 kg can / 1,100 kg tank

Shelf Life

One year from production in the original packaging

Health and Safety

- Keep in closed containers away from direct sunlight.
- If swallowed, seek medical attention immediately.
- Refer to the Safety Data Sheet (MSDS).

Basis Of Data

Product Information

Chemical base	Calcium lignosulfonate
Physical state / color	Liquid / brown
Density	$1.15 \pm 0.05 \text{ g/cm}^3$
pH	7 ± 2
Chloride ion content	None



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