

DRAGON[®]

Superplasticizing Concrete Admixture



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DRAGON[®] is a superplasticizing admixture used at the batching plant or job site to increase concrete slump. Its retarding and slump-retaining action is intended for reducing the water-to-cement ratio, producing and transporting concrete in hot regions, and producing concrete commonly up to the 40 MPa strength class.

Applications

- Concrete up to the 40 MPa strength class in hot weather
- Workability retention for approximately 1 hour at 40°C after batching-plant addition
- Improved pumpability through long pump lines
- Reducing cold-joint risk when placement is interrupted
- Tank-wall and swimming-pool concrete requiring improved compaction and reduced permeability
- Architectural and exposed concrete with smooth, uniform surfaces
- Beams, columns, shear walls and one-sided walls
- Concrete flooring and reduction of cement content by up to 10%

Approvals / Standards

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

Advantages / Benefits

- Water reduction of 10 to 30% 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, creep and shrinkage

Guideline for Use

At the batching plant, add DRAGON after the cement; the approved source recommends dilution with water at a water quantity equal to twice the admixture quantity before addition. For truck-mixer addition, assess initial slump, bring concrete to the discharge opening, add DRAGON onto the concrete, return the load to the drum and mix at high speed for 4 minutes. Recheck slump before discharge and repeat the approved procedure if required.

Dosage

0.4 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 400, 1.5 kg of DRAGON and 16 cm initial slump; after 1 hour the slump was 11 cm and the 28-day cylindrical compressive strength was 36 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

Basis Of Data

Product Information

Chemical base	Naphthalene sulfonate formaldehyde
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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