



Conplast Sprayset

Powder accelerator

Uses

Conplast Sprayset is used to provide a rapid set to sprayed concrete. This improves overhead spraying, permits thicker build in one pass and provides early support strength.

Advantages

- **Rapid set** : Allows faster build and permits rapid overhead spraying.
- **Economic** : Minimises rebound loss
- **Tolerant** : Can allow spraying on surfaces subject to water ingress.

Standards compliance

Concrete Society - Specifications for Sprayed Concrete.

Properties

Set time and rate of early strength gain :

Cement	Dose of C.S. % Wt/Wt on cement	B.S. initial set		B.S. final set ASTM initial set		ASTM final set	
		mins	secs	mins	secs	mins	secs
Type A OPC	2	0	30	6	00	+ 90 min	
	5	1	45	4	00	16	30
SRPC	2	1	00	10	00	+ 90 min	
	5	0	30	1	00	16	00
Slag cement	2	1	30	17	30	+ 90 min	
	5	0	30	1	00	65	00

Mix 3 : 1 sand : cement by wt w/c ratio : 0.45

Development of penetration resistance using BS 4551 method

BS	initial set	0.5 N/mm ²
	final set	3.5 N/mm ²
ASTM	initial set	3.5 N/mm ²
	final set	27.6 N/mm ²

The information on this graph should be taken together with the data in the two tables.

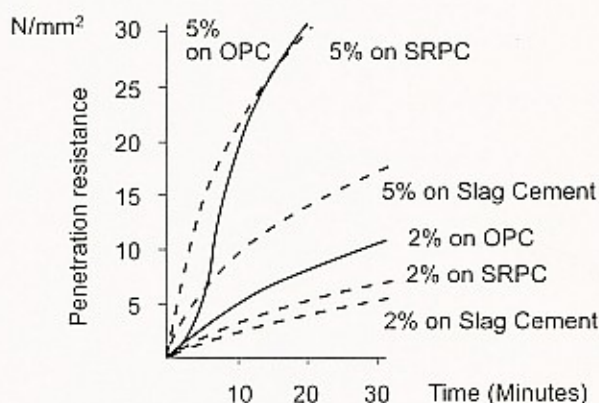
The actual performance and properties required will determine the dose level of Conplast Sprayset to be used. Low dosages should be used where long term strengths are the primary requirement. High dosages should be used where early age stiffening is the major consideration.

Description

Conplast Sprayset is a fine chloride-free white powder which, when added to a cement/aggregate dry mix, and with the addition of water, gives an accelerated set to the sprayed concrete.

Technical support

Fosroc provides a technical advisory service for on-site assistance and advice on admixture selection, evaluation trials and dispensing equipment. Technical data and guidance can be provided for admixtures and other products for use with fresh and hardened concrete.



Conplast Sprayset

Cement	Dose % Wt/Wt	8 hrs N/mm ²	24 hrs N/mm ²	3 days N/mm ²	7 days N/mm ²	28 days N/mm ²	Cement Characteristics		
							C ₃ S %	C ₃ A %	Fineness m ² /kg
Type A	0	1	11	21	32	45	58	8	350
OPC	2	1	14	24	33	36			
	5	2	13	24	33	35			
Type B	0	-	6	21	31	40	56	8	330
OPC	2	1	8	18	25	34			
	5	1	10	20	24	30			
Type C	0	4	23	36	45	60	63	11	315
OPC	2	8	29	29	34	41			
	5	8	32	27	31	38			
Slag cement	0	-	3	9	13	24	53	4	
	2	1	7	12	16	23			
	5	2	5	8	13	17			

Mix 3 : 1 sand : cement by wt.
w/c ratio: 0.5

Strength results are measured on 70.7 mm cubes according to BS 4551

Application instructions

Rate of addition

Typical rate of addition is 2-6 kg of Conplast Sprayset powder/100 kg of cement. The optimum rate should be found by site trials.

Application

Conplast Sprayset powder is added direct to the blending hopper containing the mixed cement and aggregate.

The accelerator only begins to work once water is added at the nozzle.

Caution

If moisture content of aggregate is above 3%, Conplast Sprayset should be added and blended immediately prior to spraying.

Overdosing

Conplast Sprayset powder can be used at rates up to 6 kg/100 kg cement. Overdosing may lead to setting before the concrete reaches the surface. The long term strength of an accelerated mix may not attain control strength if high dosage is used.

Estimating

Supply

Conplast Sprayset is supplied in plastic lined sacks 20 kg.

Coverage

At 2% dosage by wt. on cement, 3:1 aggregate : cement ratio, 100kg powder is needed for 100 m² at 100 mm thickness.

Storage

Shelf life 18 months in original unopened package.

Precautions

Health and safety :

Conplast Sprayset powder is alkaline, in saturated solution pH 13. Gloves and goggles must be worn.

Prolonged contact with skin should be avoided and any material washed off with water immediately. Any accidental eye contamination should be washed with plenty of water and immediate medical attention should be sought.

If swallowed drink plenty of water followed by diluted vinegar or lemon juice. The treatment should be completed by drinking milk or olive oil. Medical attention should be sought.

Spillage: Wash with water.

Fire : Conplast Sprayset powder is non-flammable.



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Additional information

Technical data and guidance can be provided on a wide range admixtures and concreting aids including accelerators, plasticisers, air entraining agents, waterproofers, mould release agents, surface retarders, workability aids and repair materials.

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