

CEMPRO SPRAYFAST

LIGHTWEIGHT CONCRETE



PRODUCT DESCRIPTION

Sprayfast is a ready to use, one pack, lightweight protective concrete. Sprayfast materials have been designed for application by "Wet Spray" Techniques. The product range is cement based and contains special cements, microsilica, polystyrene beads, clay granules, alkali resistant glass fibres and LCK-Mix. Sprayfast materials have the added benefit that they can be trowel applied as well as sprayed, removing the need for applied as well as sprayed, removing the need for obtaining a range of materials to cover all requirements. The formulation and grading of the components provide material with minimal losses due to rebound.

APPLICATION

Sprayfast has been designed to be pumped and sprayed. Ideal for use in concrete repair, refurbishment, protection and lightweight construction where savings can be made due to the very low proportional material weight. Sprayfast will bond to almost any clean substrate including glass and can be sprayed in layers up to 150mm thick in one application.

SPRAYFAST Properties	LC-10	LC-25	LC-35
General	Single pack, add water on site		
Finish	As-sprayed or floated		
Colour	Light Grey (<i>can colour to suit</i>)		
Compressive Strength	8-10 N/mm ²	22-25 N/mm ²	35-40 N/mm ²
Tensile Split Strength	1.1 N/mm ²	2.4 N/mm ²	3.4 N/mm ²
Specific Gravity (Kg/m ³) (<i>wet</i>)	900-1000	1300-1400	1600-1700
Specific Gravity (Kg/m ³) (<i>dry in place</i>)	700-800	1100-1200	1350-1450
E-Modulus	4.0-6.0 GPa	10.0-12.0 GPa	15.0-17.0 GPa
Average Bond Strength	1.0 N/mm ²	1.3 N/mm ²	2.0 N/mm ²
Water Penetration to DIN 1048	4 mm	3 mm	5 mm
Thermal Conductivity (W/m°C)	0.28	0.41	-
Maximum Particle Diameter	4mm		
Carbonation Depth	3mm	3mm	4mm
pH Value	12 to 12.5 (<i>when wet</i>)		
Flash Point	None		
Standard Bag Size (<i>can vary to suit</i>)	25Kg		
Water Addition (<i>per standard bag</i>)	8 litres	6.5 litres	5 litres
Yield (<i>for bag size above</i>) <i>Approx. After Mixing</i>	33 litres	23 litres	17 litres
Number of Coats	One or more as required		
Minimum Practical Thickness	10mm – Unreinforced. 15mm – Reinforced		
Subsequent Coats	50% Strength - 1 day after initial set 75% Strength - 3 days after initial set 98% Strength - 28 days after initial set		
Shelf Life	Minimum of six months if stored as instructed		
Storage	Store bags unopened in a dry environment, off the ground. Do not store opened bags. Do not expose to frost or extremes of temperature.		

IMPORTANT: It is important to note that the whole bag must be mixed in one process.

PRODUCER:

CemPro AS

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Substrate Preparation

As with all repairs & applications it is essential to apply to a clean, sound surface free from grease, oil, dust & loose material.

Sprayfast can be applied to unprimed & the majority of primed steelwork. Due to Sprayfast's cement base, alkali sensitive primers or paints should be removed prior to application. If the paint cannot be removed a sealing coat should be applied (see Lightcem for advice). All loose rust or paint should be removed prior to Sprayfast application. Ideally surfaces should be grit blasted and then degreased.

Concrete substrates must be adequately prepared, all surfaces containing grease or oil should be cleaned with detergent & care taken to ensure the oil/grease is removed and not spread around. The face to be sprayed should be drenched with clean water prior to the application of Sprayfast to ensure the best bond possible.

In some instances there may be the requirement to install mesh prior to application of Sprayfast to allow even distribution of stresses created by thermal loading or shrinkage. Advice can be obtained from CemPro AS

Application

Sprayed application must be carried out by an Applicator recognised by CemPro AS. Sprayfast products should be applied in accordance with the latest "Instructions for Application" available from CemPro AS. Further guidance can be obtained from The Good Practice Guide produced by the Sprayed Concrete Association.

Practical Coverage: This is influenced by mixing, pumping & spraying techniques, which will affect the applied density. The wastage factor will depend on such details as the degree of site control, size & shape of items being sprayed & frequency of stoppages. This can best be determined by experience.

Method of Application: Sprayfast must be mixed with potable water by mechanical means, such as forced action mixers (Cretangle) or slow speed drill paddle mixers. Mixers attached to pumps are also suitable. Add the majority of the water to the mixer prior to adding the Sprayfast; add the remaining water during mixing to reach desired consistency. Sprayfast must be mixed for a minimum of 5 minutes to ensure correct performance. The amount of water required may vary according to ambient temperature & relative humidity.



When spraying to a thickness over 100mm, care should be taken to ensure that the build up is not too rapid resulting in possible slumping, as large an area as possible should be worked. Avoid feathering edges by cutting back at least 10maround the area to be sprayed if required. Substrate movement joints should be continued through the Sprayfast layer and suitably sealed.

Sprayfast can be placed by pumping or spraying as well as by hand/trowel. Pumps such as Putzmeister P11 or Lancy PH9 R eco may be used for spray application.

Finishing: Levelling and initial finishing should be carried out using a wooden or plastic float immediately after spraying has finished. Any overcoating that takes place should be finished with a wooden float or damp sponge. Surface overworking should be avoided may result in cracking.

Curing: Good curing is essential. Particular care is required in hot and/or windy conditions. Curing can either be with a coat of spray-applied curing membrane (Febecure), or by covering the area with plastic sheet or wet hessian, if the area is to subsequently receive an overcoat.

Cleaning: All equipment and tools should be cleaned once work is completed or during extended breaks

Product Selection

The Sprayfast range of products has been created with a selection of strengths available to suit the requirements of the application. With these strength variations come differing densities and thermal properties, which may be the characteristic, required. The information on the front of this sheet displays the varying characteristics of the products. For further assistance in selection of the correct product, please contact CemPro AS who will happily answer any further questions.

Health And Safety Precautions / COSHH Regulations

Sprayfast products are asbestos & mineral fibre free, do not emit toxic or hazardous fumes before, during & after application, or under exposure to fire.

As with all cementitious products, if Sprayfast comes into contact with skin it may cause irritation. In case of contact with eyes, immediately flush with water for at least 15 minutes. Call a physician. In case of contact with skin, wash thoroughly.

Some of the Sprayfast products contain polystyrene beads as well as glass fibres, which should be prevented from entering the atmosphere during mixing by fixing a cover over the mixer. The mixer operator should wear a mask during the mixing operation. The nature of Sprayfast during application is such that it does not produce dust & less protection is required here. In common with all powder products, care should be taken to minimise raising dust.

For further information refer to the CemPro Products Health & Safety Information Sheet which contains more detailed information relating to Health & Safety & COSHH matters.

Technical Support

For further information and technical questions or problems please contact our Technical Department.

The information given within this Product Data Sheet is based NOT ONLY on laboratory work but also on practical experiences gained during projects. However, because of numerous factors affecting results, this information is offered without guarantee and no patent liability is assumed. If further information is required, please contact CemPro AS

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