

CLF Super Seal Concrete Curing & Surface Hardeners

BACKGROUND

For many years the accepted method of hardening and dust proofing concrete floors has been the application of surface treatments based on Sodium Silicate and Magnesium Fluorosilicate. Until recently their effectiveness has been assumed rather than measured and their application has continued, in spite of being labour intensive, due mainly to the perception that they are cheap materials.

As well as producing what is now known to be a limited technical performance, these materials are limited in their scope and in their practical application. For example – they can only be applied after concrete has dried out over a period of two weeks – they harden but do not cure or seal – they usually need at least two applications with intermittent wash down and drying periods.

In more recent years materials based on polymer resins in aromatic solvents have been developed to provide a better performance than silicate systems. As well as a better performance, these materials are offering greater scope and quicker on-site application. For example – they can be applied shortly after power floating has finished – they provide the extra functions of curing and sealing – they are simply applied in one spray application.

Economically they score because they save on the purchase of polythene or other curing agents, as well as saving on labour costs.

Since these materials work by penetrating the concrete surface, they are generally known as “in surface seals”. Such a material is CLF Super Seal. CLF Super Seal is a clear acrylic resin polymer solutions, which impregnates concrete surfaces to combine all the benefits of curing, hardening and sealing.

USES FOR CLF SUPER SEAL

Curing Agent – CLF Super Seal forms an effective curing membrane for fresh wet concrete meeting ASTM C309 standards.

Impregnation/Sealer – CLF Super Seal impregnates even fresh concrete, sealing and protecting the surface.

Concrete Floor Hardener – CLF Super Seal impregnates and improves, hard wearing, non-dusting surface qualities to new or existing concrete floors.

GRADES AVAILABLE

CLF Super Seal (75% curing efficiency) – is a unique “in surface” seal and when tested on only 30MPa concrete achieved 0.08mm of wear, which is better than AR1 high abrasion to BS8204 classification abrasion resistance.

CLF Super Seal Super 90 (90% curing efficiency) – is a similar product to CLF Super Seal but with a higher solid content to provide a higher curing efficiency. It is important to note that Super 90 is liable to peeling if slightly over-applied or if it is applied in colder conditions.

ADVANTAGES OF CLF SUPER SEAL

- Cures, seals, dust proofs and hardens in one operation.
- Quick drying and economical.
- Single rapid spray application.
- Can be applied shortly after finishing new concrete thus saving on cost of polythene or other curing agents.
- Enables floor to be laid, cured and hardened in the single site visit.
- Enables easier removal of construction splashes and easier cleaning before hand over to client.
- Saves considerably in labour costs compared to silicate systems.
- Technically out performs silicate systems (“Research Developments in Abrasion Resistance” available on request.)
- Can also be applied to mature concrete, will accept future over-coatings.
- Can be used as an anti-carbonation coating.
- Supplied as a single component, ready-to-use liquid.
- Easily applied by semi-skilled labour.
- Can be applied over coloured floors.

INSTRUCTIONS FOR USE

Base concrete – New concrete: CLF Super Seal may be sprayed on to newly laid concrete after finishing of the concrete.

Base concrete – Existing concrete: Existing concrete substrates should be clean, sound and free of laitence, oil, paint, film or any other contamination. Captive grit blasting or grinding are the preferred methods of preparation although high temperature application of a neutral detergent may be beneficial with oil/grease contamination. Sweep or vacuum all dust and debris from the surface. A dry surface is preferred, but damp surfaces are acceptable providing there is no free water present.

MIXING

CLF Super Seal is supplied ready to use.

APPLICATION

CLF Super Seal should be sprayed evenly from either an agricultural-type sprayer or by airless spray unit to concrete free from surface water and suitably prepared. Spraying equipment should be cleaned before hardening using Gun Wash.

CURING AND SEALING

Cure concrete or CLF Dry Shake finishes after the final trowelling by spraying on CLF Super Seal at a rate of 7 - 10m² per litre depending on the density of power trowelling. In colder conditions, i.e. winter time, the application of CLF Super Seal may have to be delayed to ensure that any remaining bleed water has fully evaporated as this may affect the final appearance of the CLF Super Seal resulting in surface bloom which will also affect the final colour appearance of the Permaban Shake Finish if being used.

Do not allow the CLF Super Seal to puddle on the floor. It may be beneficial to apply the CLF Super Seal as two separate applications at 14 - 20m² litres each, one to cure the floor and the second at a later stage after cleaning by the main contractor and prior to hand over to the client.

With a one-coat application a sheen finish is achieved

Subsequent coats of epoxy, vinyl, acrylic (solvent or emulsion) and alkyd paints generally bond well to CLF Super Seal treated concrete but test patches should always be applied to ensure compatibility of the particular paint brand.

TECHNICAL DATA

Coverage

7 to 10m² per litre per coat depending on porosity of surface.

Drying Time

Touch dry 2 to 4 hours at 20°C. Fully dry 24 hours at 20°C.

Curing Efficiency Equivalent

CLF Super Seal - 75%, CLF Super Seal Super 90 - 90% when tested to ASTM C309 when applied at 7 - 10m² per litre depending on the density of power trowelling.

Packaging

200 litre drums.

Shelf Life

9 months if kept unopened in original sealed containers in a cool dry place free from temperature extremes.

Flash Point

25°C (Abel-Closed Cup)

Safety

Store in a cool, dry place, well ventilated and protected from temperature extremes. Do not smoke or expose to a naked flame. Store in securely closed containers. Avoid skin and eye contact. Avoid inhalation and ensure good ventilation. Wear gloves, mask and eye protection. Use barrier cream on exposed skin. Any spill of CLF Super Seal on skin should be immediately removed with a proprietary skin cleaning cream/gel, NOT solvents. In case of eye contact, wash copiously with water and seek immediate medical attention.

Spraying on CLF Super Seal

