

## Floorgard® HP

HIGH PERFORMANCE, EPOXY RESIN, 100% SOLIDS SOLVENT-FREE SYSTEM

### DESCRIPTION

**Floorgard HP** is a four component (Base, Hardener, Filler & Colour Pack) solvent-free epoxy resin high build coating. The formulation was chosen to allow the incorporation of non-skid grit and provide a high degree of chemical and abrasion resistance.

The result is a satin smooth finish coloured to individual requirements. It has excellent adhesion qualities, is impervious and easily cleaned.

### USES & ADVANTAGES

**Floorgard HP** is a heavy duty, commercial treatment for concrete floors, walls and steel that is attractive and easily cleaned. **Floorgard HP** is resistant to chemical attack and the action of forklift, vehicular, and commercial type traffic.

Suitable for use in wet areas where strict levels of hygiene and cleanliness are required or where chemicals are manufactured, spilled or are an integral part of the process.

Use in food and chemical industry, hospitals, schools, kitchens, high traffic applications and many other installations.

Specially selected and processed grades of quartz sand anti-slip grits are available to make safe all types of working areas for both personnel and plant.

**Floorgard HP** may be used without non-skid grit as a sealer on epoxy floor screeds, a built up system or as a high quality protective coating for floors, walls, coves, drains, etc. and is readily available in clear or standard colours.

#### • Advantages include:-

- Long lasting and easily maintained with good resistance to most chemicals and solvents.
- Provides safety for plant and personnel while saving on cleaning and maintenance costs.
- Suitable around food stuffs during and after installation.
- Non toxic.
- Suitable for coating in contact with potable water.
- Available in high gloss clear where a sacrificial wear coating or extra chemical resistance is required.
- Provides an attractive gloss finish.
- Available in a wide range of light reflective colours to provide a brighter work area.

### PROPERTIES

Typical physical properties (22 kg pack at 23°C)

<b>Solids Content:</b>	100% w/w
<b>Pot Life:</b>	35-40 mins.
<b>Mixed S.G.:</b>	1.55-1.60 kg/L

**Mix Ratio:** A : B : C : D (by weight)

**Powder Colour** 2 : 1 : 0.1 : 3

**Powder Colour** 2 : 1 : 0.15 : 3

(for white colour)

**Paste Colour** 2 : 1 : 0.2 : 3

**Compressive Strength:** >75 MPa

ASTM C579

**Bond Strength:** >2 MPa

ASTM D4541 (Concrete failure)

**Shore D Hardness:** >80

ASTM D2240

**Heat Resistance:** Upto 60°C

ASTM D648

**Potable water Contact :**

Comply to the requirement as per APHA & AWWA

**Recoat Time @23°C:** 10-24 hrs.

**Recoat Time @10°C:** 20-48 hrs.

**Initial Hardening:** 3-5 hrs.

**Full Cure:** 7 days

**Dry Film Thickness Floor (2 coats):**

400 microns

**Dry Film Thickness Wall (2 coats):**

200 microns

### Chemical Properties:

**Floorgard HP** is resistant to a wide range of chemicals.

Specific data is available on request.

**Resistance to Spillages:** (Example only)

- Toluene - Sulphuric Acid 30%

- Acetic Acid 5% - Skydrol

- Sodium Hydroxide 30% - Sodium Chloride

- Ammonia 20% - Kerosene

- Used Sump Oil - Petrol

- Hydrochloric Acid - Lactic Acid 5%

- C41 (Kodak) Chemistry - Ajax Liquid Gel

- Vegetable Oils

Surface staining may result from exposure to some aggressive chemicals.

Good housekeeping practice requires spills to be quickly removed and washed.

### DESIGN CRITERIA

**Floorgard HP** is designed for application in two coats to achieve an approximate total dry film thickness of 400-450 microns on floors and 150-200 microns on walls.

Substrates should be dry and not suffer, or be likely to suffer, from rising damp. If necessary, suitable damp-proof membranes should be installed to prevent this eg. **Floorgard Moisture Barrier** or **Floorgard EB**.

Substrates should not have a relative humidity greater than 80% at the time of installation.

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## SUBSTRATE PREPARATION

### Surface Preparation

It is essential that **Floorgard HP** is applied to sound, clean, dry substrates in order to achieve maximum adhesion between the floor coating and substrate.

Because **Floorgard HP** is a relatively thin coating, the substrate must be fine textured. Any surface irregularities may show through causing excessive wear on high spots.

If surface preparation produces an excessively deep profile on the substrate, advice should be sought from Cormix International Limited regarding suitable methods to produce a smoother and leveller substrate.

Steel should be sandblasted or abraded to remove all scale, rust, grease, etc.

### New Concrete Floors

Unless water-reduced, the floor should be at least 28 days old and give a hygrometer reading not exceeding 80% RH. Dry removal of laitance by light gritblasting is preferable but where this is not feasible, treat by chemical cleaning, followed by thorough rinsing with water and complete drying. Dust and other debris should then be removed by vacuum brush.

### Old Concrete Floors

A sound, clean substrate is essential to achieve maximum adhesion. Light grit blasting or acid etching should be carried out as for new concrete floors. Oil and grease penetration should be removed by hot compressed air treatment and primed with **Floorgard Primer 903** or detergent water blasted and treated with **Floorgard Sealer** and **Moisture Barrier**.

### Epoxy Screeds

**Floorgard HP** may be applied over Cormix epoxy resin screeds. High spots or trowel marks should be rubbed down and dust and other debris removed by vacuum cleaning.

## MIXING

- Add slowly colour pack into the base component stir until homogeneous and no lumps.
- Gradually add one bag of the **Floorgard HP** fillers into the mixture of the base and colour pack. Continue mixing with a Festo type electric mixer.
- Add the hardener and continue mixing entire mix for a minimum of 3 minutes once all components have been added.

**Note:** Mix in an efficient manner to ensure no colour pigment streaking is visible and scrape the side walls of the mixing vessel with a long bladed spatula to dislodge any unmixed material.

## APPLICATION

### 1<sup>st</sup> Coat

Having made the necessary tests and primed if necessary, apply **Floorgard HP** by brush or roller at a rate of 5 m<sup>2</sup> per litre or slightly heavier if medium grit is to be used.

After about 20 minutes of application @30°C and not more than 30 minutes, start covering the coated surface with the required grade of grit. The **Floorgard HP** Grit should be lightly and uniformly broadcast over the wet **Floorgard HP**.

If any areas have lost their gloss, recoat lightly before applying grit. In order to achieve required texture finish, practical trial should be carried out prior to application in large areas. The large areas have static and dynamic joints. Prior to application, the static joints should be prefilled and level with **Condur EA1** where as dynamic joints should be filled with suitable back- up material such as **Conflex Cell** and then primed with **Conflex PS Primer** and filled with **Conflex PS** sealant.

The **Floorgard HP** grit should be lightly and uniformly broadcast over the wet **Floorgard HP**.

When the first coat is hard (usually the next morning refer "Properties" section) sweep off all excess grit. For good appearance and easier cleaning, it is important that all loose grit be removed at this time.

When abutting to previous work ensure that after the removal of the tape there is no residual tape or adhesive contamination remaining. The adjoining fresh coat of **Floorgard HP** must be blended into the existing coat so as to avoid any seam, as this could subsequently result in an adhesive failure.

### 2<sup>nd</sup> Coat

Mix the liquid as before and using a paint roller apply a coat over the grit. (See "Coverage"). It is important that this final coat be uniform but the exact rate of application may be varied to suit the finish required. A heavy final coat will give the best slip resistance in wet conditions.

Brushes and rollers must be washed thoroughly at least once each hour and immediately after finishing. Use Cormix Solvent to clean up solution and when finished give brush a final wash in soap and water. Rollers should be discarded after use.

At temperatures of 20°C- 30°C foot traffic may be permitted after 24 hours, and light vehicular traffic after 72 hours; however, in cold weather a longer period before use may be required. For best results, do not apply below 10°C. Allow 5-7 days before subjecting to chemical attack or severe abrasion.

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## LIMITATIONS

**Floorgard HP** should not be applied to any surface subject to :-

- Moisture movement - use moisture barrier to protect it.
- Steam cleaning.
- Freezing conditions.
- Porous or poor quality concrete causing excessive use and absorbancy of the product.
- Unusually cold conditions during curing (<10°C)
- Above ambient temperatures of service (40°C) e.g. floors subject to hot water.
- Severe or unusual, chemical attack.
- Severe or unusual, conditions of service beyond the limiting physical and chemical properties of epoxies.

Care should be taken in selecting colours as some will darken or develop a brown tinge when exposed to sunlight or certain chemicals. This effect is noticeable on white, light colours and grey systems, in brown, yellow and red colours it is less noticeable.

**Floorgard HP** is not recommended for exterior use where it is subject to sunlight or in applications involving prolonged water immersion. Contact Cormix International Limited for detailed information.

**NB:** Care has been taken to ensure that colours manufactured under our modern process are as close as possible to agreed reference samples. However, it should be noted that no guarantee can be given of exact colour matching.

An on site trial should be carried out to ensure that the correct grade of grit is chosen so that the required degree of skid resistance and aesthetic appearance is obtained.

**Floorgard HP** should not be applied on to surfaces known to suffer from rising damp or having a relative humidity greater than 80%. **Floorgard HP** should not be applied at temperatures below 10°C.

**Floorgard HP** is also not recommended for use where it is subject to high concentrations of hot chicken fat. Refer to Cormix International Limited for further information on applications subject to these conditions.

**Floorgard HP** is not recommended as an application over tiles.

## COVERAGE RATE

Coverage - floors: 5 m<sup>2</sup>/litre (3.2 m<sup>2</sup>/kg) per coat on concrete, 200 micron.

The coverage figures given are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

## PACKAGING

**Floorgard HP** : 30.50 kg packs

## STORAGE & SHELF LIFE

**Floorgard HP** has a shelf life of 12 months if kept in a dry place below 35°C in the original, unopened packs. Store in dry conditions between 10°C and 30°C, away from sources of heat and naked flames in the original, unopened packs. If stored at high temperatures the shelf life may be reduced. **Floorgard HP** should be protected from frost.

## DISPOSAL

Spillages of component products should be absorbed onto earth, sand or other inert material and transferred to a suitable vessel. If possible, add the other components and mix and allow to cure. Disposal of such spillages or empty packaging should be in accordance with local waste disposal regulations.

## MAINTENANCE

The service life of a floor can be considerably extended by good housekeeping practices. Regular cleaning of **Floorgard HP** may be carried out using a rotary scrubbing machine with a water miscible cleaning agent.

## ADDITIONAL INFORMATION

**Floorgard HP** is suitable for use in food processing areas, where "taint" is important.

Cormix International Limited manufactures a wide range of products specifically designed for the specialist flooring industry. These include liquid-applied chemically resistant coatings, self-levelling epoxy toppings and trowel-applied highly abrasion-resistant screeds. Among them, are products suitable for use in the food and drinks industry, the pharmaceutical industry and in areas subjected to heavy industrial use. In addition, a wide range of complementary products are available. These include joint sealants, waterstops, waterproofing membranes and specialised products for the repair and refurbishment of damaged reinforced concrete.

For the further information about products or publications, contact Cormix International Limited.

## HEALTH & SAFETY

**Floorgard HP** should not come in contact with the skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye protection. If working in confined areas, suitable protective equipment must be used. The use of barrier creams provide additional skin protection.

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If any adverse reaction to contact with these or any industrial chemicals, patient should be transported immediately to a doctor or hospital.

Product Material Safety Data Sheets for any Cormix product are available to users on request. Read MSDS and data sheet carefully before first use.

**Fire:** Floorgard HP is non-flammable.

**CONTACT DETAILS****Cormix International Limited**

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**TECHNICAL SERVICE**

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

**QUALITY ASSURANCE**

ISO 9001 : 2015 verified by TUV Nord.

**DISCLAIMER**

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc.

Cormix does not take responsibility nor need to defend others testing that does not achieve the published data.

The user must test the products suitability for the intended application and purpose. Cormix reserves the right to change the properties of the product.

Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advise offered.

**NOTE :** Every reasonable precaution is taken in the manufacture of all CORMIX- products to ensure that they comply with CORMIX's high standard of quality. The recommendations and properties of the product are based upon what is believed to be the most reliable information available, and are not intended as recommendations which infringe on other patents. Although all CORMIX-products are subject to rigid quality tests, no specific guarantee can be given, because results depend, not only on quality, but also on other factors beyond our control. We welcome therefore consultation in the event of doubt concerning application, or performance, and point out those oral recommendations, which vary from the instructions contained herein, are not binding without written confirmation by CORMIX. All transactions shall be subject to our terms and conditions of sale- delivery- and- service. This data sheet supersedes the previous one and a reprint may be issued without notice to supersede this edition, as and when deemed necessary. The information given in this leaflet is to the best of our knowledge true and reliable. Field service where provided does not constitute supervisory responsibility. Our guarantee is therefore limited to the quality of materials delivered.