Technical Data Sheet

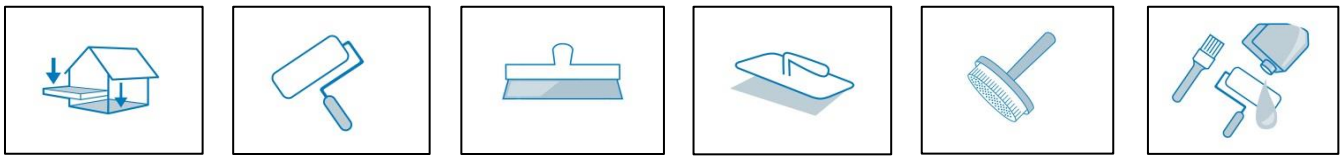
# DisboPOX 210 SF

## Multi-Purpose, Solvent-Free Epoxy Primer, Sealer And Binder For Levelling Mortars For Interior And Exterior



### Product Description

DisboPOX 210 SF is a general purpose, two components, polyamine cured, solvent free (total solid) and transparent, low viscosity epoxy resin based primer for DISBON Epoxy and PU floorings. The material has excellent penetration and bonding properties to ensure good adhesion on mineral substrates such as concrete and cement screed. DisboPOX 210 SF can also be used as capillary and pore sealer, equalization leveler for roughness > 0.5mm, repair material for minor cracks, intermediate layer and quartz filled levelling mortars. The material is designed to build the base for floor coating systems with high chemical and mechanical load resistance on mineral floor surfaces.



### Recommended Use

Suitable for interior and exterior (only naturally weathered) use on normal to strong absorbent mineral floor surfaces:
Uncoated concrete
Cement screeds
Cement bound substrates
Epoxy mortars

Unsuitable are all mineral substrates which showing not sound and dry, surface defects, cement laitance, week compressive strength, rising moisture, contaminants or condensation.

**DisboPOX 210 SF should only be used by experienced and trained professionals.**

### Recommended Fields of Application

Warehouses and hangars
Showrooms and shops
Production facilities and factories
Garages, parking bays, ramps and car park decks
Pedestrian walk ways
Hotels and restaurants
Laboratories and plant rooms
Production and processing areas
Schools and hospitals

### Physical Properties*

| | |
|---|---|
| Colour | Transparent<br>Always use material of same batch, when applying on seamless surfaces as transparent sealer. |
| Volume solids | 98±2% |
| VOC | 42 g/litre |
| Thinner/Cleaner | Epoxy thinner |
| Finish | Gloss |
| Flash point | > 25°C |
| Packing size | 5 & 25 kg (Base + Hardener) |
| Mixing ratio | 5.75 base: 1.0 hardener pbw |
| Shelf life | 24 months |

*The values stated are average values. All Data is valid for mixed product only. The actual value determined on an individual delivery may deviate slightly, without compromising product suitability. In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.





**Caparol Paints L.L.C. - Saih Shuaib 4, Dubai Industrial Park, P.O. Box: 62182, Dubai, UAE, Tel: +971 43687600, Fax: +971 43687650 - www.caparolarabia.com**

## Advantages

Excellent bonding to mineral substrates

Multi-purpose and economic

Solvent free with low emission

Easy to apply with low viscosity

After full curing physiologically harmless

Excellent penetration ability

No odour during application

Can be filled with quartz sands on site

Seals pores and capillaries

Weather proof and moisture resistant

Resistant to most of aqueous solutions, caustic solutions, diluted acids, petrol, animal oils, greases, urine and fats

Durable and low maintenance costs

## Certificates and Test Values*

DCLD Product Conformity certified

ADCE certified civil supplier

Bond strength tested as per BS 1881 part 207

VOC tested as per USEPA 24

Chemical parameters tested as per ICP-OES

*Additional certificates and approvals may available on request or could be arranged if required.

## Substrate Quality and Surface Preparation

The long-term durability of any resin floor system is determined by the adhesive bond achieved between the flooring material and the substrate. IT IS MOST IMPORTANT THAT SUBSTRATES ARE CORRECTLY PREPARED PRIOR APPLICATION!

All substrates (new and old) must be structurally sound and free from contamination such as oil and grease, rubber skid marks mortar and paint splashes, curing compound residues or other adhesion impairing contaminants. Conventional concrete curing compounds should be removed before application. Excess laitance deposits are best removed by mechanical surface profiling, like diamond grinding, ball blasting, grit or shot blasting, milling or hydro-jetting (including the necessary post-treatment), followed by brush and vacuum cleaning to remove dust debris to achieve an open textured surface. Mechanical wire brushing may be appropriate for small areas. Oil and grease penetration should be removed using a proprietary chemical degreaser or by hot compressed air treatment. Any damaged areas, surface irregularities or blowholes/voids should be repaired before application. Adjust the substrate evenness of the planned, finer surface finish. If necessary, carry out additional substrate levelling measures. The compressive strength of the substrate shall not be less than 25MPa. Damaged, weak concrete should be cut back to sound concrete and surface defects must made good with a suitable cementitious repair mortar or a scratch coat of DisboPOX 210 SF. The concrete slab in contact with the ground must have a vapour barrier installed. Repairs must be well set and dried out. Damp or not fully cured substrates can lead to defects in subsequent coats, such as blistering or cracks. Check existing coatings for their load-bearing capacity. Remove any non-load bearing or structurally weak coatings. The pull-off (adhesive/tensile bond) strength of substrates must be 1.5 N/mm2 on an average, with a minimum individual value of 1.0 N/mm2. The residual moisture content of the substrate must not exceed 4% pbw when using the CM-measurement or Oven-dry-method. No raising moisture according to ASTM (Polyethylene-sheet).The temperature of the substrate must be at least 3°C above the current dew point temperature. A damp proof course must have been properly installed and be intact. IF IN DOUBT, APPLY TEST AREA FIRST! Protect walls and columns against resin splashes using masking tape and plastic sheeting.

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## Mixing the Coating

DisboPOX 210 SF should be mixed in the proportions supplied in the exact ratio. Before mixing, precondition both base and hardener components to a temperature of approximately 15 to 25°C. DO NOT MIX BY HAND!

The base and hardener components of DisboPOX 210 SF should be thoroughly stirred before the two are mixed together. Mix mechanically using a slow speed stainless steel (300-400 rpm) electric stirrer with a wing type mixing paddle or other suitable equipment. For the preparation of mortars use a forced action mixer of rotating pan, paddle or trough type. Free fall mixers should not be used. Mix the base slowly in its container, and then the entire contents of the hardener container should be poured into the base container while continuing to mix the two materials thoroughly for 3 to 4 minutes. Scrape the sides and the bottom of the container several times to ensure complete mixing. Keep the mixer blades submerged in the coating to avoid introducing air bubbles.

DO NOT WORK OUT OF THE ORIGINAL CONTAINER!
After proper mixing to a homogeneous consistency pour the mixed material of base and hardener into a fresh container and mix for another minute thoroughly to achieve a consistent mix. Then if necessary, add the quartz sand and mix for a further 2 minutes until a uniform mix has been achieved. Use the material as quickly as possible after mixing.

ENSURE SHORT STIRRING TIMES AT LOW SPEED TO PREVENT AIR BUBBLE FORMATION IN THE MATERIAL!
Foam formation can have an impact on adhesion and can cause visible small pores. This, in turn, leads to patchy and inhomogeneous drying and visible imperfection of the coating layer.
Only if necessary adjust the working consistency of DisboPOX 210 SF with Epoxy thinner up to max. 10%.

## Film Thickness and Spreading Rate on Average Quality Substrate

**Depends/variate as per application type and specification. Please refer to particular Method Statement (MS).**

## Pot Life / Working Life*

| Substrate temperature | **10°C** | **25°C** | **40°C** | |
|---|---|---|---|---|
| Pot Life | 60 | 25 | 15 | minutes |

*Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

## Drying Time*

| Substrate temperature | **10°C** | **25°C** | **40°C** | |
|---|---|---|---|---|
| Dry to over coat, minimum | 24 | 12 | 6 | hours |
| Dry to over coat, maximum | 96 | 48 | 24 | hours |
| Ready for use - foot traffic | 48 | 24 | 12 | hours |
| Ready for use - light traffic | 5 | 3 | 2 | days |
| Ready for use - full cure for service | 10 | 7 | 5 | days |

* Drying time generally related to air circulation, temperature, film thickness, no of coats and relative humidity. The given data must be considered as guidelines per coat only. The actual drying time before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying substrate, requirement for early handling and mechanical strength etc. The figures given are typical with: Good ventilation (outdoor exposure or free circulation of air), typical film thickness, on coat on top of inert substrate and relative humidity 70%. Dry to over coat, minimum: The shortest time allowed before the next coat can be applied. Dry to over coat, maximum, atmospheric: The longest time allowed before the next coat can be applied. Ready for use: Minimum time before the coating can be permanently exposed to the intended environment/medium.

## Application Conditions/Limitations

New concrete floor should be at least 28 days old or have a moisture content of less than 4% before proceeding with epoxy application. Substrate temperature should be max. 30°C and min.10 and at least 3°C above the dew point of the air and for at least 24 hours after the application at (15°C). DisboPOX 210 SF should not be applied on surfaces known to, or likely to suffer from, rising dampness, potential osmosis problems or have a relative humidity greater than 75%.

The curing time of the material is influenced by the ambient, material and substrate temperatures. At low temperatures, the chemical reactions are slowed down; this lengthens the pot life, open time and curing times.




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High temperatures speed up the chemical reactions thus the time frames mentioned above are shortened accordingly. To fully cure, the material, substrate and application temperature should not fall below the minimum.

For all floor coating applications, apply on a constant or falling temperature only as this will decrease the risk of bubble formation due to expansion of air that is enclosed in the concrete! If applied during rising temperatures “pin holing” may occur from rising air.

After application, the material should be protected from direct contact with water for approx. 24h (at 20°C). Within this period, contact with water can cause a surface bloom and/or surface tackiness, both of which must be removed. In common with all epoxy materials, some slight shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.

## Application Equipment’s/Tools

DisboPOX 210 SF can be applied to the prepared substrate by spreading with a squeegee, roller, brush or trowel. The best choose depending to substrate condition, application method and how the material will be used. Re-usable tools must be cleaned carefully with Epoxy thinner. Always ensure that the tools are to be in use for Epoxy material only (not for PUR or water based Epoxy!).

## Associated Products

DisboPOX 230 SF (Pigmented, solvent-free epoxy seal coat) or other non-aqueous DisboPOX/DisboPUR coatings as per TDS
Caparol Epoxy Thinner (Thinner)
DisboADD (Silica quartz sands/fillers):

| Product name | Grain size |
|---|---|
| DisboADD 450 | 0.1 – 0.4 mm |
| DisboADD 460 | 0.4 – 0.7 mm |
| DisboADD 480 | 0.7 – 1.2 mm |
| DisboADD 490 | 1.2 – 2.0 mm |

## Cleaning of Tools

Tools must be cleaned immediately after use or during longer breaks with Epoxy thinner.

## Typical Application Procedure*

**Standard Primer under solvent free, non-aqueous DisboPOX /DisboPUR coatings (interior/exterior) or Sealer**

Preferred application is by using a squeegee and then back rolling crosswise. Avoid puddle formation. Use a good quality roller, suitable for epoxy application, and ensure that loose hairs on the roller are removed before use. Make sure that a continuous; pore free coat covers the substrate. Glossy areas should be treated always by roller to achieve a flat surface aspect. A minimum film thickness of 50 microns should be applied; this can be increased as per specifications. Where if necessary, apply two priming/sealing coats.

For poorly absorbent substrates, the material may thinned up to 15% with Caparol Epoxy Thinner.

If the coating must be be over coated within 24 hours,

A subsequent application of a solvent-free, non-aqueous DisboPOX /DisboPUR coating can be carried out in accordance to the respective Technical Data Sheet and/or Method Statement.

## Important Note

This product is for professional use only. The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Caparol's technical documentation.

Applicators and operators shall use appropriate personal protection equipment when using this product. The user of the product must test the product’s suitability for the intended application and purpose. Users must always refer to the most recent issue of the local Technical Data Sheet (TDS) for the product concerned, copies of which will be supplied on request.




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Field service where provided does not constitute supervisory responsibility. Suggestions made by Caparol either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Caparol, are responsible for carrying out procedures appropriate to a specific application.

### Maintenance
To maintain the appearance of the floor after application, DisboPOX 230 SF must have all spillages removed immediately and must be regularly cleaned using rotary brush, mechanical scrubbers, scrubber dryer, high pressure washer, wash and vacuum techniques etc. using suitable detergents and waxes.

### Colour Stability
When applicable, products primarily meant for use as primers or antifouling may have slight color variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

### Storage and Handling
24 months when stored in warehouse conditions between 15 - 35°C in the original, unopened packs. The product must be kept in in a cool, dry, enclosed, well ventilated space and away from source of heat and ignition. Do not expose to direct sun-light. Containers must be kept tightly closed and always handle with care. Keep out of reach of children.

### Disposal
Material and related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Attention should be paid to removing wastage from site in compliance with standard construction site procedure. Only completely containers should be handed in for recycling. Liquid and hardened material which contains organic solvents or other hazardous substances shall be disposed of as paint waste. Uncured product residues are special hazardous waste. Do not empty contents into wadis, drains or watercourses.

### Health and Safety
After full curing, DisboPOX 210 SF is physiologically harmless. Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not inhale spray mist. Avoid skin contact. Wear safety gloves, goggles and protective clothing. When workings with the product do not eat, smoke or works near a naked flame.

Spillage on the skin should immediately be removed with suitable cleanser, soap and water. If mixed resin meets the skin, it must be removed before it hardens with a resin removing cream followed by washing with soap. Avoid prolonged inhalation of solvent vapors. Some people are sensitive to epoxy resins, hardeners, and solvents; it should not meet skin and eyes or be swallowed. All respiratory equipment's must be suitable for the purpose and meet appropriates standards. In case contact with eyes, rinse immediately with plenty of water and seek medical advice immediately.

The regulations of the local trade association and/or other authorities, regulating safety and hygiene of workers handling epoxy resins must be followed.

### Disclaimer
This guideline is given based on the present state of our best scientific and practical knowledge of the products when properly stored, handled and applied under normal conditions in accordance with Caparol's recommendations. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. Caparol's products are considered as semi-finished goods and as such, products are often used under conditions beyond Caparol's control. Caparol cannot guarantee anything but the quality of the product itself.




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