

ATECH PLUS

Flooring Solutions

EPOFLOOR® GPX

General Purpose, Epoxy Binder

- Solvent Free
- Low Viscosity
- Economical
- Multipurpose - Priming/Sealing/Blending

Description

EPOFLOOR® GPX is a multipurpose, 100% solids, unfilled epoxy with a variety of uses. **EPOFLOOR® GPX** can be pigmented, trowelled, brushed, rolled and filled with quartz aggregate.

Major Applications

- Concrete Sealer - Bulk warehouses and factory floors
- Primer – Surface sealer for porous floors prior to applying an epoxy topping
- Topping Sealer - Sealer for cementitious toppings in domestic and commercial applications.
- Epoxy Toppings – Binder for quartz screeds suited to food premises, workshops and loading docks.
- Epoxy Underlays – Binder for epoxy concrete used for releveling topping slabs.
- Epoxy Grouts – Binder for quartz filled epoxy mortars, suited to bolt and bedplate grouting
- Concrete Rehabilitation – Rapid set, thin bed patching mortar, ideal for bunds, drains and channels.
- Concrete Rehabilitation – General purpose low viscosity injection grout.

Surface preparation

Surfaces to which **EPOFLOOR® GPX** resin is applied need to be free of fats, oils and curing agents. Any surface laitence needs to be mechanically removed. Shot blasting or diamond grinding are the preferred techniques. Acid washing is a suitable alternative where a coating only is to be applied. For trowelled toppings the cohesive strength of the surface should be in excess of 1.5 MPa. Poorer preparation may result in cohesive failure of the underlying substrate.

Major Applications/Application Instructions

EPOFLOOR® GPX may be used in a number of different ways.

Grouting - Epoxy & sand mixtures have much higher tensile strengths than concrete, typically 10 - 15 MPa compared to 2 -3 MPa for concrete. This property makes them ideal for bolt grouting, particularly where dynamic loadings or high tensile anchors are involved. Resin is mixed with quartz flour for thin sections and

graded sand for thicker sections. The mix is then poured into the desired cavity. The amount of binder and quartz aggregate normally varies from 1:1 to 5:1 by volume. The consistency will vary from a highly fluid grout to a dry pack sand castle appearance. For bolt grouting a sand/resin mix of 1-2 to 1 is normally satisfactory. Bolt holes should be a minimum of 1.5 times the diameter of the bolt to be inserted. The final compressive and tensile strength is dependant on the amount of aggregate content and will mostly fall between 50 and 80 MPa. Even higher compressive strengths can be obtained using **EPOGROUT® 200/QF1** as the binder.

Concrete Bonding - Unfilled epoxy binders such as **EPOFLOOR® GPX** make excellent new to old concrete adhesives, their use prevents bond failure at the slab interface. To be effective it is most important that the new concrete is poured whilst the epoxy bonding agent is still wet. Coverage rates of bonding agent are around 3-4 m²/litre but can vary more widely with highly porous slabs or very dense slabs. Use of **EPOFLOOR® GPX** as bonding agent will result in concrete failure rather than interface failure.

Slab Resurfacing & Structural Repairs - Concrete surfaces which show exposed aggregate or are poorly graded can be rehabilitated with an epoxy mortar mix. The chosen mortar mix depends on the job required. To resurface exposed aggregate a fluid epoxy slurry is normally used, this is achieved by blending 1 volume of epoxy with 1 volume of a very fine sand. To relevel a slab, a dry mix containing up to 6 volumes of aggregate per volume of epoxy can be used. The aggregate used is normally a graded mix containing both coarse and fine sands.

Priming & Sealing Concrete Surfaces - Unsealed concrete is subject to abrasive wear and dusting, this can easily be eliminated with a coat of **EPOFLOOR® GPX**. A resin mix is applied by roller at around 3 -5 m²/l, 2 coats are recommended. The first coat is lightly sanded before application of the second coat. A good quality roller must be used to avoid lint entrapment.

Epoxy Screeds - Epoxy Mortar Toppings are widely used in the food industry as a protection against floor damage by food based chemicals and to withstand aggressive chemical cleaning required to maintain a hygienic environment. **EPOFLOOR® GPX** is an ideal base resin which can be blended with suitable aggregate to achieve a desired epoxy topping. The resin may be used for the production of both trowelled and self levelling toppings.

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Technical Properties

Appearance	Clear resin and hardener
Specific gravity	1.1
Mix Ratio	3:1 by volume
Aggregate/Resin Ratio	1:1 to 3:1 by volume,
Pot Life	20 to 60 mins at temp. of 10 to 30 deg. C
Cure Time	1 - 3 days depending upon temperature
Cured Strength	80 MPa Compressive,
Bond strength	concrete failure (3.5 MPa)
Serviceability	Suited to environmentals up to 60 deg. C
Packaging	Available in 4 ltr, 16 ltr, 60 ltr & 200ltr Bulk packaging

Environmental Hazards & Conditions

The presence of surface water, humidity and temperature can drastically affect the quality of any epoxy finish. Products should be applied as near to 20°C as possible. Humidity should be below 80% to prevent surface water spotting due to condensation. Rising temperatures can cause surface bubbling, product should be applied when the surface is cooling.



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Safety Precautions

These products may cause allergic reactions through skin contact, goggles, protective gloves and overalls must be worn. Ensure that there is adequate ventilation and avoid breathing the vapour.

Exclusion Clause

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