

HYCHEM GP

Epoxy binder for general purpose use



HYCHEM
EPOXY SYSTEMS

HYCHEM GP Epoxy, is a 100% solids, low viscosity epoxy binder for use in a wide variety of applications where an epoxy resin is the ideal solution, yet the required performance parameters do not warrant the use of more expensive, specialized resin systems.

USE

HYCHEM GP is recommended for use as a concrete primer, a clear concrete sealer, a self leveling binder for broadcast epoxy toppings and as a trowellable epoxy mortar for the preparation of sub floor epoxy toppings. It is also the ideal binder when mixed with quartz aggregates for the quick repair of damaged concrete surfaces.

TYPICAL APPLICATIONS

- Excellent adhesion to concrete and most building materials
- Compatible with all other HYCHEM coatings and toppings
- Very versatile, suitable for all general purpose use
- Abrasion and impact resistant
- Hard wearing and durable
- High strength, 70 MPa
- Low odour, will not taint food
- Non flammable, no fire hazard
- Cost effective

FEATURES AND BENEFITS

- As a concrete repair and resurfacing system
- Expansion joint repairs
- Manufacturing facilities
- Loading docks
- Assembly plants
- Factories
- Public utilities
- Sports complexes
- Workshop floors
- As an economical subfill mortar

PHYSICAL PROPERTIES @ 25 °C

Mix Ratio- volume	3:1 (resin to hardener)
Specific gravity	1.10 kg per litre
Pot life	45 minutes
Tack free time	6 hours
Cure time	18 hours (foot traffic)
Application temperature	+5 °C to +35 °C
Viscosity	500-1000 cps
Service temperature	+ 50 °C
Compressive strength	70 MPa
Applied thickness	100 micron - 150mm

CHEMICAL RESISTANCE

The chemical resistance of a material can be determined by the wt gain of a sample immersed in the chemical. The greater the wt gain, the poorer the resistance of the material. The table below gives the relative resistance of HYCHEM E300 relative to other available epoxy binders. A value of 100 is equivalent to an absorption of 3%.

CHEMICAL	GP	E300	E300 SL	E300SLF	TL2 Flash
15% Acetic acid	80	60	60	25	25
20% Caustic soda	0	0	0	0	0
20% Phosphoric acid	25	40	40	60	60
12% Hypochlorite	15	15	15	15	15
Xylene/butanol blend	200	200	125	20	20

SURFACE PREPARATION

The principal of surface preparation is twofold;

1. The surface must be free of contaminants which would affect adhesion, eg. oil, dirt and curing compounds.
2. The surface must be free of soft, crumbly material which would give way when the epoxy is cured.

Generally, captive shotblasting and/or surface diamond grinding are acceptable methods. Prior washing with a caustic soda solution may be required for surfaces contaminated with animal or vegetable fats. Solvent washes may need to be used to remove petroleum oils and stains.

MIXING

- In a clean container, mix HYCHEM GP liquid components (resin and hardener @ 3:1) together using a helical mixer at a speed of 500 rpm until the mix becomes homogenous (1-2 minutes).
- Add quartz aggregates if and as required, gradually to the mix whilst still mixing.
- Move the mixer around from side to side and top to bottom and scrape the sides of the mixing vessel to ensure thorough mixing.

APPLICATION

GP Epoxy may be used and applied in a number of different ways:

- As a primer
- As a clear sealer
- As a pourable mortar
- As a self leveling topping
- As a trowellable floor topping
- As a trowellable sub layer.

The method of application naturally differs, however surface preparation remains essentially the same.

PRIMING AND SEALING

Where required, apply HYCHEM GP as an epoxy primer to the prepared surface. Either use neat or dilute by up to 15% with an epoxy solvent to assist penetration and apply by roller at roughly 5-8m² per litre depending on the porosity of the substrate. For installations where a further topping is to be applied, lightly broadcast the still wet primer with quartz aggregate to aid the adhesion of subsequent applications.

Scratch coat

Concrete which is showing exposed aggregate needs to be treated with a lightly quartz filled mortar applied by trowel at around 1mm thickness. This material is prepared by adding 1 kg of silica flour per 1 litre of resin blend.

Mortar topping

HYCHEM GP can be blended with various quartz aggregates to produce an epoxy mortar of a trowellable consistency.

The topping thickness may vary from 5mm to 150mm with appropriate choice of aggregate. During installation it is important to maintain continuity of wet material between pours. Allow to cure for 16-24 hours before applying subsequent coats or toppings if necessary.

CLEAN UP

Xylene can be used for cleaning tools and equipment before the mixed compound begins to harden.

COVERAGE

1. Primer, 5-8m² per litre depending on the porosity of the substrate.
2. Scratch coat. 0.75 litre per sq metre.
3. Trowelled topping, 2 litres per sqm per 5m of topping depth.

PACKAGING

Available in 4, 16, 80 and 800 litre kits.

SHELF LIFE

12 months from date of manufacture, stored under shelter at 25 °C in original unopened container.

NOTE: Customer responsibility

The technical information and application advice here given is based on the best information available at the time of print. As the information herein is of a general nature, no assumption can be made as to the products 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 Commonwealth or State Legislation.

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



HYCHEM
EPOXY SYSTEMS

Head Office
3/19 Burns Road, Heathcote NSW 2233
T 02 9548 2186 F 02 9520 2522 E admin@hychem.com.au W www.hychem.com.au