


HYCHEM
 EPOXY SYSTEMS

HYCHEM TL2 Flash

Flash set Novolac epoxy binder for floor toppings requiring high impact and fat resistance

HYCHEM TL2 Flash is a specialist, solventless epoxy binder that combines a very fast cure time with very high impact and fat resistance. The product serves a multipurpose function, it may be combined with aggregate to produce a topping or it may be used as a sealer for existing surfaces.

HYCHEM TL2 Flash can also be used in conjunction with HYCRETE Polyurethane Cement Toppings as a sealer for the broadcast surface. This improves the fat and solvent resistance of the polyurethane, whilst maintaining its good impact and hot water resistance.

USE

HYCHEM TL2 Flash is designed for use where a fast cure, short down time resin system is required that will withstand hot fats. It is a companion product to HYCHEM E300SLF, yet with a faster curing system and improved surface blush in adverse cold, damp environments.

TYPICAL APPLICATIONS

- Abattoirs
- Bakeries
- Commercial kitchens
- Cereal producers
- Confectionery
- Dairy products
- Fast food retailing
- High traffic loading docks
- Poultry processing
- Smallgoods manufacturing
- Snack food manufacturing
- Supermarket rotisseries

FEATURES AND BENEFITS

- High resistance to hot vegetable and animal fats
- * High resistance to petroleum oils and solvents
- Abrasion and impact resistant
- Hard wearing and durable.
- High compressive strength
- Low odour, will not taint food
- Non flammable, no fire hazard
- Fast curing, short down times
- Can be applied as a topping and as a coating

PHYSICAL PROPERTIES

Mix Ratio - volume	2:1 resin to hardener
Specific gravity	1.15:1
Pot life	10 minutes
Tack free time	2 hours
Cure time	4 hours
App. temperature	0 to 25 °C
Service temperature	Up to 80 °C
Compressive strength	80 MPa (6:1 w/w) quartz mortar
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 TL2 Flash relative to other available epoxy binders. A value of 100 is equal to an absorption gain 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

Epoxy toppings can exert considerable shear forces on the underlying concrete substrate due to differential thermal movements. It is most important that the concrete surface is adequately prepared. The cement paste layer and any surface coatings already in existence need to be removed. This is best carried out using captive shot blasting, grinding or scarifying.

The resultant surface should have a minimum tensile strength of 1.5 MPa and a minimum compressive strength of 25 MPa.

Weaker surfaces need to be upgraded with a sub layer of a HYCHEM GP epoxy mortar.

MIXING

- In a clean container, mix HYCHEM TL2 Flash liquid components (resin and hardener @ 2:1) using a helical mixer at a speed of 500 rpm until the mix becomes homogenous (1–2 minutes).
- Add HYCHEM SL aggregates at a ratio of 1:1 by volume, 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

Sub layer

Apply a sub layer of HYCHEM GP Epoxy epoxy mortar to achieve the desired falls to drains if time allows.

Otherwise, blend quartz aggregate and TL2 Flash at a ratio of 3-4:1 by volume and trowel out.

TL2 Flash surface topping

- Apply the resin aggregate mix to the floor using a notched trowel at a coverage rate of 2 litres/sqm.
- Into the wet TL2 Flash, broadcast antislip quartz aggregate generously into the surface until a dry beach finish is obtained without surface humps. Aggregate size should be 16/30 or 18/40.
- Once cured, sweep off and vacuum excess loose aggregate.
- Apply a sealcoat of TL2 Flash in the desired colour at a coverage rate of 2 sm/l.
- Lightly broadcast hard wearing aluminium oxide non-slip aggregate into the wet surface.
- Apply a final coat of HYCHEM SF12 Novolac epoxy coating when the base coat has cured sufficiently to be able to apply the seal coat. Coverage around 4-6 sqm/l.

Antislip rating: The above method will yield an antislip rating of a minimum R11 when tested according to the ramp method.

A rating of R12 to R13 can be gained by broadcasting small amounts of 24–36 grit alumina into the TL2 Flash seal coat.

JOINTING

Joints in the floor need to be reflected in the epoxy topping. When the topping has cured, the surface needs to be sawcut and an epoxy joint sealant such as HYFLEX NS applied.

CLEAN UP

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

COVERAGE

Using the correct amount of epoxy is critical to the performance of the final floor. A tendency to often overload the aggregate relative to the resin component can have dire effects on the longevity of the finished topping. A 5 mm floor will require a minimum of 2 litres of TL2 Flash per sq. metre.

PIGMENTATION

Epoxy pigments are available from HYCHEM to provide a range of colours to flooring finishes. These pigments can be affected by chemical reagents, it is the responsibility of the user to ensure that the pigments used are suitable for the project being considered. Pigments supplied are meant for industrial use and will not necessarily comply with architectural colour standards.

PACKAGING

Available in 12, 30 and 60 litre kits.

SHELF LIFE

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

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.

WARNING – ENVIRONMENTAL CONDITIONS

Epoxy products are sensitive to the prevailing temperature and humidity at the time of application.

- High temperatures will shorten the pot life and application may become difficult due to insufficient time being available to lay the product.
- Low temperatures and high humidity will result in the epoxy reacting with surface moisture to produce a white powdery finish. To avoid this, epoxy coatings and toppings must not be applied if surface temperatures are below the dew point while the material has not yet cured. The white surface finish however is only an aesthetic consideration and does not affect the performance of the material.
- Chemical spillage of acids and sanitizing agents may attack the resin or pigments used in the coating and can result in discolouration
- Differing epoxy products have differing resistance to chemicals, always ensure that the correct product is chosen for the service environment to be encountered.

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.