HYCHEM SF20

Heavy duty epoxy coating with good colour stability

*Australian Paint Approval Scheme (APAS) approved & Green Star Certified

DATA SHEET

HYCHEM
EPOXY SYSTEMS

Hychem SF 20 is a solventless, chemical resistant, two components epoxy coating with high solvent resistance and good colour stability.

USE

HYCHEM SF 20 is the preferred product of choice for floor and wall coatings in the architectural and pharmaceutical industries where aesthetic qualities are of high importance. It is not recommended for applications where exposure to acetic and lactic acid is commonplace.

FEATURES AND BENEFITS

- Non yellowing and suitable for pastel finishes
- Chemical resistant to petroleum oils, solvents, acids and alkalies, hot fats
- Durable – 100% solids provides a 500 micron DFT (two coat application)
- Wear resistant – hard wearing even in harsh and punishing environment
- Slip resistance – meets AS/NZ 4568 R10, will meet R11 to R13 with quartz aggragates
- Solventless – non-flammable
- Odourless – can be used in retail situations without disturbing neighbouring businesses
- Aesthetic flexibility – available in a variety of colours
- High gloss finish – aesthetically pleasing, easy to maintain
- Wide colour range – available in many colours (colour matching on request)

PHYSICAL PROPERTIES @ 25°C

Solids content	100 %
Pot life (200 gram sample)	20 minutes
Mix ratio by volume (Resin:Hardener)	2:1
Initial cure	9 hours
Re-coat time	24 hours
Cure time	24 hours – light traffic 72 hours – full traffic
	60 MPa (6:1) quartz mortar
Film thickness per coat	200–300 microns
Slip resistance ANZ4586:2004	R10—R13 dependent on anti-slip
Colour stability	Excellent indoors

TYPICAL APPLICATIONS

- Bulk retail outlets and warehouses
- Component manufacturers
- Commercial kitchens and bars
- Exhibition halls
- Gaols and police stations
- Hospitals and nursing homes
- Motor workshops and aircraft hangars
- Pharmaceutical plants
- Schools and colleges

CHEMICAL RESISTANCE

The chemical resistance of a material is generally determined by immersing the material in the designated chemical and then seeing whether the material gains or loses wt over time. The greater the change in wt, the poorer is the resistance to that chemical. The table below shows the relative absorption after 7 days immersion. A value of 100 represents an increase in wt of 3%.

20% Phosphoric acid	120	10% Acetic	250	50% Sodium hydroxide	0
20 % Sulphuric acid	0	10% Lactic acid	150	35% Hydrogen peroxide	30
70% Sulphuric acid	20	Xylene	5	10% Sodium hypochlorite	25
98% Sulphuric acid	destroyed	Ethanol	180	Skydrol	5
Toluene	65	Butyl Cellosolve	85	MEK	700
Trichlorethylene	15	Water	15	Conc Hydrochloric acid	40

APPLICATION GUIDELINES

Surface preparation

- Concrete substrate shall be firm, clean and dry with a compressive strength of 25 MPa and surface tensile strength of 1.5 MPa minimum
- New concrete must be allowed to cure for a minimum of 28 days
- Repair imperfections (holes and cracks) with an epoxy patching compound such as Hychem GP where necessary
- Remove surface laitance, contaminants, coating, curing compound and all weak and loose materials
- Prepare concrete surface by Diamond Grinding or light Shot Blasting to provide the appropriate surface profile for optimum mechanical keying

Pre-conditioning product

It is important to note that even when the application environment is warm, products which have been stored in cold or cooler conditions should always be pre-conditioned ideally to 20–25°C to ease mixing, application and help avoid other potential issues such as amine bloom or blushing.

Applying a cold product in a warm environment is not recommended.

Priming

- Priming is generally not required
- Where necessary, apply Hychem E 100 by roller at a rate of 5 to 6 sqm/litre

MIXING

Mix only enough quantity that can be applied within the work life which is temperature dependent

- For Hychem SF20 Neutral, add colour pigment into the Component A (Resin) and mix until homogeneous (1 minute) using a helical mixer at a speed of 500 rpm
- Mix Hychem SF20 liquid components (Resin & Hardener) together using a helical mixer at a speed of 500 rpm until the mix becomes homogeneous (1.5 to 2 minutes)
- Move the mixer around from side to side and top to bottom and scrap the sides of the mixing vessel to ensure thorough mixing

APPLICATION

Smooth finish

- Apply **Hychem E 100 Primer** (where necessary) using a squeegee or short nap roller at a coverage rate of 6 to 8 sqm per litre depending on the coarseness of the sub-floor surface. Allow to cure for a minimum of 12 hours or over-night but less than 24 hours.
- Apply first coat of **Hychem SF20** using a squeegee or short nap roller at a coverage rate of 3 to 4 sqm. Allow to cure as above.
- Apply second coat of **Hychem SF20** at a coverage rate of approximately 4 to 6 sqm per litre. Allow to cure as above.

Non-slip finish

- Apply as above. Broadcast grit aggregate (size to suit anti-slip requirement) into the First Coat while it is still wet and allow to cure overnight.
- Sweep off loose quartz aggregate.
- Apply second coat of Hychem SF20 to seal the surface.

Slip Resistance is dependent on the size (grading) of aggregates used:

- 80 mesh Alumina – R 11
- 36 mesh Alumina – R 12
- 24 mesh Alumina – R 13

CLEAN UP

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

COVERAGE

Hychem E 100 Primer	6 to 8 sqm/litre (depending on the porosity and texture of the surface)
First coat	5 to 6 sqm/litre (depending on the porosity and texture of the surface)
Second coat	6 to 8 sqm/litre
Over self-levelling topping	6 to 8 sqm/litre
Over trowelled on topping	4 to 6 sqm/litre

SAFETY PRECAUTIONS

- Wear gloves, eye protection and overalls during mixing and application.
- Ensure there is adequate ventilation and avoid breathing the vapour

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PACKAGING

COLOUR	KIT SIZE	NO. OF COLOUR PACK REQUIRED
Neutral	5.5 Litre	1 x 500ml
Neutral	22 Litre	2 x 1 Litre pigment
Colour	6 Litre	None
Colour	24 Litre	None

SHELF LIFE

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

WARNING – ENVIRONMENTAL CONDITIONS

Temperature and the surrounding atmospheric conditions will play a part in the curing process of all epoxy products. Under conditions of low temperatures and high humidity the final cured surface finish can be adversely affected potentially resulting in poor gloss retention, discolouration over time, poor overcoatability and intercoat adhesion. Quite often these conditions will result in the formation of a white film over the surface often evident after contact with water. This chemical reaction with the atmosphere is commonly referred to as “amine bloom” or “amine blush”.

If this occurs then the existing coating will need to be abraded to completely remove the affected surface to ensure the adhesion of subsequent applications. In some cases partial or complete re-priming may be necessary.

Attention also needs to be paid to the substrate temperature which should be at least 3°C and preferably 5°C above the dew point during the curing phase.

Industry standards recommend the accurate recording of times and dates, batch numbers, consumption rates and environmental conditions including substrate and air temperatures, humidity levels and dew point readings during both the application and curing processes. Full material warranties cannot be provided unless all the relevant data has been recorded accurately.

If in doubt consult the Hychem technical department for advice.

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