HYCHEM SF25

Low cost water-based epoxy coating

DATA SHEET

HYCHEM
EPOXY SYSTEMS

HYCHEM SF25 is an economy grade, pigmented epoxy coating which provides a wear and water resistant finish to broad areas of concrete exposed to pedestrian and light vehicular traffic. It provides a more heavy duty finish than conventional paving paints.

The water based finish of HYCHEM SF25 eliminates the health and fire risk posed by solvent based sealers and coatings.

USE

HYCHEM SF25 is primarily recommended for:

* Multistorey carparks
* Domestic garages
* Light industrial warehouses and workshops
* Plant rooms and back of house areas
* Conference and exhibition buildings
* Floors and thoroughfares of public buildings

FEATURES AND BENEFITS

* Low VOC
* Low odour
* Good adhesion
* High water resistance
* Wide colour range
* Bonds to damp concrete
* Non-flammable

TECHNICAL DETAILS

Product type	Water-based epoxy system
Mix ratio	1 part resin, 3 parts hardener by volume
Dilution	Can be diluted with 25% water
% volume solids	38% as manufactured 30% with maximum 25 parts/100 water
Chemical resistance	Resistant to spillage of dilute acids, caustic soda, bleach, hydrocarbon solvents, mineral oils, petrol, radiator and brake fluid. Spillages should be removed within 8 hours or earlier.

CURING DETAILS@ 25°C

Pot life	1 hour
Tack free time	6 hours
Recoat time	24 to 48 hours
Walk on time	24 hours
Full cure	7 days
App temp	12 to 30°C
App humidity	Less than 80%

Cautionary note

Water-based epoxy products are highly dependant on the evaporation of water to effect the curing process. The product can only be applied when humidity is less than 80% making good ventilation essential. Cold weather significantly reduces the amount of water vapour the air can contain, a humidity check should be regularly carried out throughout the proceedings of any coating application. The use of electrical heating is recommended. Application of HYCHEM SF25 outside these guidelines may result in the product not attaining full performance, even if weather conditions improve after application.

STANDARDS COMPLIANCE

1. HYCHEM SF25 has been tested to AS/NZS 4586:2004 Slip Resistance of Surface Materials Report No. 5022, and has been found to yield a Class X Rating in the pendulum test and a rating of R10 in the Oil-Wet Ramp test.

   Please note, this is a guide only and an onsite test, using the actual project surface will need to be carried out where specification compliance is required.

2. HYCHEM SF25 has been tested for VOC content as required by the Green Building Code of Australia and has been found to have a VOC content of 7gms/litre which is well under the limit of 65 grams/litre.

SURFACE PREPARATION

The surface to be coated must be clean, free of dust, laitance, curing agents, old coatings etc. New concrete must be allowed to cure for a minimum of 28 days. Patches and divots, where necessary should be repaired with an epoxy patching compound. For best results the existing surface should be diamond ground to achieve a physical surface profile. Where this is not economically viable, an acid etch and mobile scrubber can be considered. The degree of surface preparation is related to the stresses that the coating will have to endure. Hot, 4WD tyres carrying stones can cause considerable havoc, the best possible surface preparation is recommended.

Use of HYCHEM SF25 in car parks

HYCHEM SF25 has been widely used as a pigmented car park coating. The environment in a car park can vary greatly. Expected coating wear on the upper car parking spaces in a residential apartment block is very low. Likely coating wear at the entry and exit gates of a high volume commercial car park is expected to be many times higher .

Specific factors such as the effect of hot, heavy duty tires at the entry gates can cause additional wear and possible coating failure if special precautions are not taken. The applied coating thickness and surface preparation are fundamental to the success of the coating system.

HYCHEM cannot control the level of traffic wear and thus provides no warranty as to service life and fitness of purpose. We suggest that minimum dry film coating thickness guidelines be adhered to:

Light duty	Upper deck parking spaces	dft 70 microns
Medium duty	Turning circles	dft 100 microns
Heavy duty	Up and down ramps	dft 180 microns
XHeavy duty	Entry gates and ramps	dft 500 microns with alumina antislip

APPLICATION

- Before commencement, check that the temperature is above 12°C and the humidity is below 80%. Ventilate and heat area if conditions are unacceptable.
- HYCHEM SF25 may be applied by brush, roller or airless spray. 1 part by volume resin is to be blended with 3 parts by volume hardener. Add the resin to the hardener and mix using a high-powered mechanical mixer at low speed and for a full 3 minutes. It is highly important to scrape down the internal sides of the container to ensure that all material is incorporated.
- Add additional water (1-4 litre) as required and mix for a further 2 minutes.
- Use a high powered mechanical mixer at low speed and mix for a minimum of 3 minutes after all components have been incorporated.
- Once mixed, the components need to stand for 5 minutes prior to use. Failure to do this can result in differing gloss levels throughout the surface.
- Apply the product by roller or airless spray at a coverage rate of 6–8 sqm/litre. Apply a second coat after the first coat has cured sufficiently to overcoat.
- The maximum recoat time is 48 hours, should this time be exceeded the entire surface needs to be mechanically reprepared.

COVERAGE

HYCHEM SF25 can be used undiluted and is applied at 6-8sqm by airless spray or roller. One 12 litre kit will thus have an approximate coverage of 85sqm. At this coverage level, a wet film of 140 microns will yield a dry film thickness of 55 microns. A two coat application will provide a minimum 100 micron dry film.

HYCHEM SF25 may be diluted with water when used in low abrasion situations such as parking decks and pedestrian traffic. When diluted 25% with water, an application rate of 8 sqm/litre is recommended, leaving a wet film of 125 micron. Application at this level will yield a dry film thicknesses of approximately 35 micron or 70 micron in 2 coats. Coverage per kit is of the order of 120 sqm.

Choice of water addition and application rate needs to be made by the contractor in line with the required service life desired and cost limitations.

Additional coats and antislip

Two coats are normally sufficient for the podium levels containing the car spaces.

The entrance, exits and ramps are subject to far higher stresses. Hot tyres, grit, acceleration and braking all contribute to coating wear. It is recommended that an additional heavy coat together with broadcast antislip is applied in these areas. Application at 4–6 sqm/litre of undiluted product is recommended.

Extended service life option

All pigmented floor coatings are subject to showing a wear pattern as they age. The thinner the coating and the higher the traffic, the quicker the wear pattern will appear.

For extended life, it is highly recommended that HYCHEM SF25 be topcoated with a final clear coat of HYCHEM 100.

PACKAGING AND SHELF LIFE

Product is supplied as a 12 litre kit made up of 3 litre of resin, 9 litre of hardener.

Product can be stored for 12 months in unopened containers at 10–30°C. Product may settle in can and require reincorporation.

HEALTH AND SAFETY

HYCHEM SF25 is corrosive to the lungs and skin, and is an eye irritant. Please wear protective glasses, respirator and clothing. Consult the Material Safety Data Sheet prior to use, seek medical advice if eye contact occurs, remove patient to fresh air if breathing difficulties occur.

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