PU200

Two pack non-yellowing PU floor finish

DATA SHEET

HYCHEM
EPOXY SYSTEMS

An extremely tough but flexible, pigmented, chemical and stain resistant, wear-resistant, durable and non-yellowing coating. Available in Gloss and Low Sheen.

PRODUCT TYPE

UV stabilised pigmented aliphatic 2-pack polyurethane

USE

This coating is ideally suited as a finish coating for seamless flooring, and as a durable, non-yellowing sealer/finish for concrete and masonry. UV exposure-related yellowing of epoxy primers and base coats is prevented when this product is used as a finish coat.

TYPICAL APPLICATIONS

- Aircraft hangars
- Aircraft and automotive workshops
- Internal and external trafficable surfaces
- Prisons
- Schools, hospitals and public buildings
- Retail
- Plant rooms

FEATURES AND BENEFITS

- Non-yellowing
- Skydrol resistant
- Durable
- Gloss or low sheen finish
- Slip-resistant options
- Scratch resistant
- Resistant to petroleum oils
- Versatile
- Abrasion and impact resistant
- High mechanical strength

APPLYING

Moisture content of the concrete must be below 6%.
Prior to the application of PU200, prime the concrete with E100.

Roller Application

1. Add pigment pack to part A resin and mix thoroughly with a low speed mechanical stirrer until complete uniformity is achieved. Add part B hardener and again mix until uniform. This should be achieved in approximately 3 minutes.
2. Apply the mixed product at a rate of approximately 6-8 m^2/litre in minimum two applications. If applying over an anti-slip base layer where the base has been broadcast with an aggregate, the consumption will increase to approximately 3-5 m^2/litre but does depend on the size of aggregate.

Where there is a requirement for increased slip resistance, PU200 can be used in conjunction with quartz sand, bauxite or aluminium oxide to produce surfaces compliant with slip/friction specifications.

PHYSICAL PROPERTIES (AT 25°C)

Mixed solids	45% (gloss)
Colour	Light grey and other colours with MOQ
Specific gravity	0.98 mixed approx.
Specular gloss 60	88 (gloss, 39 (10% addition PA-14)
Coverage	6-8 metres/litre/coat
Drying time	2.5 hrs gloss, 6 hrs satin (25°C, 65% rel. hum.) Light foot traffic after overnight drying. Allow 48 hrs minimum before any heavy traffic. Requires 5–7 days to achieve full solvent and stain resistance.
Recoat window	4–24 hrs
Viscosity	200 cPs approx. (30°C)
Durability suitable for exterior exposure	R9 – R13 dependent on addition of aggregate
UV protection	Contains UV absorbers
Water resistance	Excellent (no effect after 7 days immersion)
Chemical resistance	Good resistance to acids, alkalis and most common solvents. Detail available in attached table.
Stain resistance	Very good (refer attached table) including tyre stain#
Abrasion resistance	Very good (refer attached table)
Monomeric isocyanate	<0.7%
Ancilliaries available	Wet edge extender (PA-03), PU cleaning solvent (PW01, PU thinner (PT01)s, flatting additive (PA-14), NY catalyst (PA07)
Transport and handling	Flammable product UN1263 PKGIII HAZCHEM 3[Y]E

RESISTANCE PROFILE		TWO-PACK NYPU FABNPU400	TWO-PACK SATIN NYPU FABNPU400+10% PA14
REAGENT	**PARAMETERS**	**RESULT**	**RESULT**
Industrial solvents			
Ethyl acetate	200 double rubs*	NC	NC
MIBK	200 double rubs*	NC	NC
Isopropyl alcohol	3 hour	Sl. Soften – recovers to NC	Sl. Soften – recovers to Sl. Mark
Xylene	3 hour	Sl. Soften – recovers to NC	Sl. Soften – recovers to Mark
Garage chemicals			
Antifreeze/water	24 hour	NC	NC
Brake fluid	24 hour	Sl. Soften – recovers to NC	Sl. Soften – recovers to V.Sl.Mark
Petrol	3 hour	NC	NC
Diesel	24 hour	NC	NC
Skydrol	3 hour	Soften – recovers to Sl.Mark	Soften – recovers to Sl.Mark
	24 hour	Soften – recovers to Mark	Soften – recovers to Mark
Process oils (recycled car tyres) – tyre stain	24 hour	NC	NC
	48 hours	NC	NC
	120 hours	NC	NC
Household chemicals			
Coffee (60°C)	24 hour	NC	NC
	48 hours	NC	NC
	120 hours	NC	NC
Sodium bicarbonate (10%)	24 hour	NC	NC
NaCL (10%)	24 hour	NC	NC
Red wine	1 day	NC	NC
Vinegar	24 hour	NC	NC
Mustard	24 hour	V.Sl. Stain – removable**	V.Sl. Stain – removable**
Graffiti chemicals			
Black marker pen	24 hours, removal with graffiti remover*	1 application	1 application
	48 hours, removal with graffiti remover*	1 application	1 application
Spray paint	24 hours, removal with graffiti remover*	1 application	3 applications
Graffiti remover FWS01	70 double rubs*	Sl. Soften – recovers to NC	Sl. Soften – recovers to NC
	24 hour	NC	NC
Scratch resistance			
Pencil hardness	>5H	>5H	

Notes
1. Samples and reagents @ 23°C
2. NC = No Change
3. * not DIN ISO 2812
4. ** Removable with Graffiti-Remover FWS01

It is highly recommended that a spill of any chemical must be removed and cleaned as soon as possible.

TEST	TEST METHOD	RESULT	RESULT
Taber Abrasion	CS-10 1000g 1500 revolutions	46 mg	65 mg
Gloss (Specular 60°)*		88	39

* Determined by painting on gloss surface single coat at recommended film weight.

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SURFACE PREPARATION

- Use xylene for first/priming coat for penetration when required – maximum 20%.
- The concrete substrate must be firm, clean and dry with a compressive strength of 25 MPa and a minimum surface tensile strength of 1.5 MPa.
- New concrete must be allowed to cure for a minimum of 28 days.
- Remove all surface laitance, contaminants, existing coatings, curing compounds and any weak and loose materials.
- Prepare the concrete surface by Abrasive Grit Blasting, Shot Blasting, Scarifying, Ultra High Pressure Water Jetting or Scabbling to provide the appropriate surface profile for optimum mechanical keying.
- The extent of surface preparation required is dependant upon but not limited to the thickness of the coating system to be applied. It is highly recommended surface preparation is carried out in accordance with industry standards and publications such as NACE 02203 item No. 22420 or ICRI Technical Guideline No. 03732.

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.

MIXING

3:1

PACKAGING

20 Litre Kit

CLEAN UP

Xylene

COVERAGE

6 – 8sqm / ltr or as specified – project specific.

SHELF LIFE

12 months

WARNING

Because of choice of subcoatings and potential extremes in weather and drying conditions during the curing of the floor coating, it is wise not to leave cars tyres directly in contact with the floor for a minimum 7 days and then no longer than overnight for another two weeks. If a vehicle is to be left in contact with the floor for extended periods of time (i.e. greater than 4 weeks), then mats (not made of rubber) should be used.

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.

SAFETY PRECAUTIONS

Epoxy polymer products may cause allergic reactions through skin contact. Goggles and protective gloves and clothing should be worn at all times. Ensure that there is adequate ventilation and air flow and avoid breathing the vapour.

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