

PRODUCT DESCRIPTION:

EPOXAL 100CR is an alternative catalyst to be used with Epoxal 100WH Part A , creating a 100% solids highly chemical resistant epoxy coating. Designed to perform with excellent chemical resistance, abrasion resistance and durability, **EPOXAL 100CR** is ideal as a high performance concrete floor coating.

PRODUCT FEATURES:

- Rapid cure and property development at ambient and low temperatures and high humidity
- Outstanding chemical resistance to household chemicals as well as industrial chemicals, excellent resistance to solvents, acids and alcohols.
- Self-leveling, **EPOXAL 100CR** is easily applied by brush, roller or squeegee methods.
- It cures to a hard abrasion resistant, blush free protective coating with excellent resistance against sea and fresh water immersion
- Excellent blush resistance and gloss retention
- Excellent adhesion to cold and damp concrete
- Quick curing ensures minimal down time
- It cures to a hard, blush free, glossy, abrasion resistant clear protective coating
- Available in virtually any colour.

TYPICAL USES:

Ideal for industrial and residential flooring, linings, mortars and grouts applied at ambient or low temperatures and humid conditions.

TECHNICAL DATA

POT LIFE:	30 minutes @ 22°C(72°F) (decreases at higher temperatures)
PACKAGING:	3L, 3 Gal. and 15 Gal. Units.
SHELF LIFE:	1 year in unopened container @ 20°C(68°F).
COLOUR:	Clear and colours
SHEEN:	Gloss
MIXING RATIO:	2:1 100WH Resin to 100CR Catalyst (by volume)
VOLUME SOLIDS:	100%
THEORETICAL COVERAGE:	1604 sqft/US Gal @ 1 mil DFT
RECOMMENDED DFT:	10 to 30 mils(min. two coats)
CURE TIME @21°C(70°F):	Recoat-5-6 hrs Light Traffic-15 hrs Full Cure-7 days
MIXED VISCOSITY @ 25°C(77°F):	1000 ±200 CPS (ASTM D445-83)
CLEANUP:	NPC Epoxal Thinners

PERFORMANCE DATA

Typical Performance After 7 Days Cure @25°C(77°F)

COMPRESSIVE STRENGTH 11.7ksi(ASTM 695-85)

TENSILE STRENGTH	
9.5KSI(ASTM638-86)	
TENSILE MODULUS	474 KSI(ASTM 638-86)
TENSILE ELONGATION	4.8 %(ASTM 638-86)
FLEXURAL STRENGTH	15.7KSI (ASTM 790-76)
FLEXURAL MODULUS	525KSI(ASTM 790-76)
HARDNESS	85(SHORE D), 2H(Pencil)

SURFACE PREPARATION:

New Concrete Preparation:

All surfaces to be coated must be clean, dry and free of all contaminants. New concrete must be cured a minimum of 28 days with no more than 3% moisture content. Any curing or hardening compounds, form oils, release agents or laitance must be removed by means of mechanical abrasion. Shot blasting or diamond grinding are the recommended methods. These two means of mechanical abrasion will clean the surface and open the pores of the concrete to allow maximum penetration of the primer. Ensure the methods of mechanical abrasion are dust-free.

Existing Concrete Preparation:

Ensure all loose concrete is removed, using a scarifier, diamond grinder, bush hammer or other methods. Remove any contamination, including grease and oil using an industrial cleaner. (Consult your NPC representative for recommended

cleaners) Prepare the entire floor by method of a shot blaster, or diamond grinder. Patch any uneven or damaged concrete using “NPC Epoxal 100 Patch” or consult your NPC representative for further instructions.

Existing coated surfaces must be intact and tightly bonded to substrate below. If stability of existing coating is in question, test a small section and check for lifting. Hard or glossy surfaces must be abraded to improve adhesion performance. *NPC will not warrant the application of Epoxal coatings over an existing paint or urethane.*

Wood Preparation:

All wood surfaces to be coated must be clean, dry and free of all contaminants. The wood surface must be very rigid, with no possible movement. Fill any voids, or seams with NPC “Epoxal 100 Patch”.

PRIMING:

Epoxal 100CR is a suitable primer for most applications over concrete. If a lower viscosity primer is required to ensure maximum bond strength, we recommend Epoxal 100 Primer. If the concrete substrate has recently been subjected to moisture, we recommend Epoxal 100 DCP. *(Please consult your NPC representative for further details about Epoxal 100 DCP.)*

Apply all of the for mentioned primers at a spread rate of 4-6 mils. If the spread rate is less than 4 mils, the substrate may not be properly sealed. If the spread rate is greater

than 6 mils it increases the probability of bubbles caused by out gassing.

MIXING:

EPOXAL 100CR is always mixed at a ratio of 2 Parts A to 1 Part B by volume. Always pre-mix the Part A (resin) component of the mixture thoroughly. **EPOXAL 100CR** is supplied in different quantities. 3L units can be mixed in the original container by adding the Part B into the Part A. 3 Gal. units can be mixed in a clean 5 Gal. container by adding the Part B into the Part A. 15 Gal. units must be mixed in smaller quantities. Ensure Part A is pre-mixed, then measure accurately by volume 1 Part B into 2 Parts A in a clean mixing container.

Always mix the two components for a full 3 minutes with a jiffy mixer.

APPLICATION:

- Mix the material according to instructions provided.
- Pour the mixed material on the prepared floor immediately.
- Spread over the desired area using a rubber squeegee or flexible trowel to achieve uniform thickness. Brush any edges around walls or permanent objects.
- Saturate a medium nap roller and backroll the material to remove any squeegee lines and provide an aesthetically pleasing finish.
- Allow coating to cure.
- Repeat this process for the second and any further coats.

For a proper bond additional coats must be applied within 24-48 hours after the completion of the first coat, depending on

temperature. If this window is surpassed, mechanical abrasion must be used to prepare the coating before any further coats.

NPC recommends a minimum of two coats, with the prime coat being 4-6 mils. The second coat should be applied at a thickness of 10-12 mils to provide a smooth uniform coat.

Do not wait more than 10 minutes between applying mixes of material to the floor. Waiting longer between mixes may cause problems with working properties and colour consistency.

This will produce a smooth pinhole free surface. If there are any pinholes, an additional coat should be applied.

To achieve a textured finish, a third coat can be applied.

- Mix the material according to instructions provided.
- Spread the mixed material at a thickness of 5-6 mils with a rubber squeegee and back roll with a saturated medium nap roller.
- Using a hopper blower, broadcast a small amount of graded silica sand over the entire floor. Silica 530 will create a medium texture that is non-slip, and relatively easy to clean.
- Back roll the coating immediately to encapsulate the sand and to achieve a uniform textured surface.
- Allow coating to cure.

CURING:

At a temperature of 22⁰C(72⁰F), **EPOXAL 100CR** will be tack free within 5-6 hours. It will support light traffic at 15 hours and will reach full cure and chemical resistance in 7 days.

LIMITATIONS:

- This product must be applied to a substrate with a minimum temperature of 16⁰C(61⁰F).
- This product will amber if it is under prolonged ultra violet light.
- This product is not recommended for areas that are exposed to severe thermal shock.
- Working time and cure times are very dependant on temperature.
- Maintain a constant temperature before and during application period, and until coating is cured.

RESISTANCE TESTING *

Reagents

Acetic Acid (glacial)	E
5% Acetic Acid (vinegar)	E
Acetone	E
Alcohol (ethyl, methyl, propyl, isopropyl and butyl)	E
Beer	E
Benzoyl Alcohol	E
Brake Fluid	E
Butyl Carbitol Acetate	E
Butyl Cellosolve	E
Carbon disulphite	E
Carbonated Drinks	E
Diacetone Alcohol	E
Diesel Oil	E
Distilled and Tap Water	E
Fruit Juices	G-E
Gasoline	E

HCl 36%	E	
High Flash Naphtha		E
25% H ₂ SO ₄	E	
Concentrate H ₂ SO ₄		S
Household bleach	E	
Hydrogen Peroxide (30%)	E	
Lactic Acid	E	
MEK	E	
Methyl pyrrodiline	E	
Methylene Chloride	S	
Mustard	E	
10% Nitric Acid	E	
30% Nitric Acid	G	
Nitric Acid Concentrate	NR	
Oleic Acid	E	
Paint Remover	S	
Phenol	G	
Phosphoric Acid (concentrate)	E	
Polyethylene Glycol (200 & 400)	E	
15% Resorcinol Solution	G	
Skydrol	E	
50% NaOH	E	
10% Sodium Hypochlorite	E	
Toluene	E	
Tomato Ketchup	E	
I,I,I, Trichloroethate	E	
Xylene	E	
Wine	E	

Rating References

E = Excellent, G = Good (Slight Stain, no change in film condition), NR = Not Recommended (film destroyed), S = Suitable for occasional spillage.***Note:** Samples cured for 7 days at ambient temperature before testing.

NOTE: The above data is solely based on lab testing done under strictly controlled conditions. Ambient temperature was used for all testing. No warranty can be given as to the accuracy of this information as it will depend upon conditions at actual project location, which are beyond our control.