

EPOXAL[®] HIBUILD

Series 3000

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PRODUCT DESCRIPTION:

EPOXAL HIBUILD is a broadcast system designed to protect new concrete floors or deteriorated floors subject to moderate abuse. **EPOXAL HIBUILD** consists of a primer, a base coat, broadcast silica and topcoats. The NPC epoxy most commonly used is Epoxal 100WH. Available in thickness range: 1/16" to 1/8" (1.5mm to 3mm). A very cost effective solution in floor protection for industrial, commercial and institutional environments.

PRODUCT FEATURES:

- Mechanically bonds to properly prepared concrete to form a hard, low maintenance protective layer, able to withstand typical operations of a light to heavy service manufacturing facility.
- Application by factory-approved contractors ensures guaranteed top quality installations.
- Quick curing epoxy technology coupled with expert installation results in minimal down time for areas receiving **EPOXAL HIBUILD**.
- 100% solids epoxy formulation means this is an odourless product formulated without solvents thus reducing health and safety concerns.
- Slip-resistant textures available for added safety in wet areas.

TYPICAL USES:

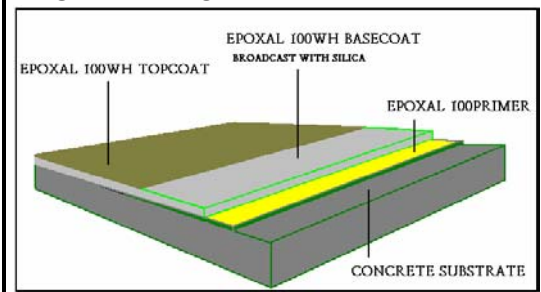
- Topping for concrete floors in light, medium and heavy service industrial environments, (i.e. production areas, lift truck aisles, shipping/receiving areas).
- Sanitary environments subjected to constant cleaning. (i.e. laboratories, clean rooms, food production areas, washrooms).
- Repair of deteriorated and worn concrete floors in areas such as automotive garages.

PERFORMANCE DATA

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

COMPRESSIVE STRENGTH:	10,236 PSI (ASTM695-85)
TENSILE STRENGTH:	2,000 PSI(ASTM C-307)
FLEXURAL STRENGTH:	5,000 (ASTM C-580)
HARDNESS:	84 (SHORE D)
ABRASION RESISTANCE:	.033g (ASTM D4060-90)
MAR RESISTANCE	: 1.0 Kg (ASTM D5178-91)
BOND STRENGTH :	100% CONCRETE FAILURE

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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 100 Epoxal 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."

INSTALLATION TOOLS:

- Epoxy Jiffy Mixer (Low Speed Drill and Mixing Bit)
- Hopper Blower

PRIMING:

Epoxal Hibuild requires a primer to be applied prior to the base coat. In most cases, Epoxal 100WH serves as an excellent primer. If a low viscosity primer is required, use Epoxal 100 Primer. The recommended thickness of the primer for Epoxal Hibuild is 6mils. Mix primer as detailed in Epoxal 100WH Product Information.

MIXING:

Epoxal 100 WH is always mixed at a ratio of 2 Parts A to 1 Part B by volume. Always premix the Part A (resin) component of the mixture thoroughly. Epoxal 100WH 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.

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Ensure Part A is premixed, 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:

Step 1. After the floor has been properly prepared to accept coating, apply one coat of primer to the entire area at a spread rate of 6 mils. Allow primer to cure.

Step 2. Mix the Epoxal 100WH base coat according to instructions, and pour contents of the mixing pail on the floor. Spread over the desired area using a rubber squeegee or flexible trowel to achieve uniform thickness of 16 mils. Brush any edges around walls or permanent objects. Saturate a medium nap roller and back roll the material to remove any squeegee lines and provide a smooth finish.

Step 3. Allow the material to settle for 5 minutes, or until the roller lines have disappeared, blending into the coating.

Step 4. Once the roller lines have disappeared, broadcast silica sand #530 into the wet coating to the point of saturation.

Step 5. Allow coating to cure.

Step 6. When the coating is cured, sweep all excess sand from the floor. Grind the floor surface with abrasive stones to remove any imperfections.

Step 7. Sweep and vacuum all sand and dust from the floor surface.

Step 8. Mix and apply the Epoxal 100WH grout coat at a spread rate of 20 mils. Apply the coating in the same manner as Step 2.

Step 9. Allow coating to cure.

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

Step 1. Mix the material according to instructions provided.

Step 2. Spread the mixed material at a thickness of 5-6 mils with a rubber squeegee and back roll with a saturated medium nap roller.

Step 3. 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.

Step 4. Back roll the coating immediately to encapsulate the sand and to achieve a uniform textured surface.

Step 5. Allow coating to cure

Note: The preceding application instructions are for a 60 mil hibuild system. To achieve a 120 mil system, insert these three steps after the first broadcast (Step 4) has cured.

Step 1. Sweep and vacuum all sand and dust from the floor surface.

Step 2. Mix and apply the Epoxal 100WH grout coat at a spread rate of 20 mils.

Step 3. Once the roller lines have disappeared, broadcast silica sand #530 into the wet coating to the

point of saturation. Allow coating to cure.

Note: Epoxal 100WH is the epoxy liquid most commonly used in this system, as a primer, base coat, grout coat and topcoat. There are other products that can be used as well. Epoxal 100Primer and Epoxal 100 DCP both make excellent primers. Epoxal 100FC, Epoxal 100CR and Epoxal 100CC are all quality alternatives to substitute in place of Epoxal 100WH as a base coat and topcoat material.

CURING:

At a temperature of 22⁰C(72⁰F), Epoxal 100WH will be tack free within 10-12 hours. It will support light traffic at 24 hours and will reach full cure in 7 days. The product will reach its full chemical resistance in seven 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.