

IHE 4000 | MULTIPURPOSE EPOXY

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

IHE 4000 is a high-solids, two component, self-leveling multipurpose epoxy for concrete floors and is primarily intended as an intermediate pigmented build-coat in systems with a topcoat.

TYPICAL USES/APPLICATIONS

- Industrial/commercial floors
- Schools
- Shop-floor systems
- Warehouses
- Airplane hangars
- Hospitals

PRODUCT ADVANTAGES

- Self-leveling
- Wide coverage rate
- Designed to be tinted
- Long working time
- Topcoat compatible

PACKAGING

15-Gallon kit
Part A - 5-Gallon Pail (x2)
Part B - 5-Gallon Pail

STORAGE

- Product should be stored indoors between 60°F to 85°F away from direct sunlight and moisture.
- Make sure containers are completely sealed to prevent moisture contamination and ensure best performance.
- Shelf life is 12 months.

APPLICATION TEMPERATURE/HUMIDITY

Minimum Recommended Temperature: 60°F
Maximum Recommended Temperature: 85°F
Recommended Humidity Range: 20-75% RH

COVERAGE

80-107 SQ.FT./Gal
(15-20 MILS)

RECOMMENDED CURE TIME FOR SANDING

(Abrading before topcoat application)

60°F: 25-27 hours

70°F: 16-18 hours

85°F: 9-11 hours

Note: Temperatures below 60°F will dramatically increase the cure time of the product and may decrease overall physical performance properties.

TEST DATA

NONVOLATILE CONTENT (ASTM D2369 METHOD E:)

>95%

VOC (FULL KIT):

<25 g/L

WEIGHT PER GALLON (ASTM D1475):

Part A: 9.56 LBS/GAL

Part B: 8.22 LBS/GAL

VISCOSITY (ASTM D2196):

Part A: 1100 cP

Part B: 205 cP

GEL TIME:

64 MINUTES

TACK FREE TIME (ASTM D5895) 13 MILS:

8 HOURS

KÖNIG HARDNESS (ASTM D4366):

Note: with 5% color tint

1 day: 60 sec.

2 day: 133 sec.

8 day: 176 sec.

ADHESION (ASTM D4541):

7 day: >500 psi (concrete failed)

WATER VAPOR TRANSMISSION (ASTM D1653):

11 MILS, tested at 74 °F

Permeability: 0.5 US Perms

COMPRESSIVE STRENGTH (ASTM D695):

Tested at 73 °F

Strength: 12000 psi

TENSILE STRENGTH/ELONGATION (ASTM D638):

Strength: 8102 psi

Elongation: 6.53%

FLAMMABILITY (ASTM D635):

Average: 103.1 mm/min.

SHORE D:

Note: with 5% color tint

1 day: 67

7 day: 81

ALL TEST DATA COLLECTION AT 70 °F UNLESS NOTED OTHERWISE.

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SURFACE PREPARATION

Installation surface must be sound and in good condition. Prepare concrete surface by diamond grinding, using 14 grit diamonds, to remove all previous coatings and to achieve CSP of 3-4. Surface must be free of contamination such as oils, silicones, or other fluid substances. Do not coat over concrete which is visibly wet/damp or in direct sunlight. Fully vacuum all dust from the surface of the concrete slab after preparation.

Concrete moisture levels must not exceed 5% using a Tramex™ moisture meter or equivalent testing device.

Ensure that the floor temperature is more than 5 degrees over the local dew point to avoid water condensation.

PRE-MIX REQUIREMENTS

Part A: Remove lid and fully mix product for 2-3 minutes prior to each use to ensure uniformity.

Part B: Not required.

MIX RATIO:

2:1 Mix ratio by volume (A:B)

PIGMENTATION (COLOR):

Use Penntek URX color tints only. Use at a rate of 5% by volume of total mixed coating. For colors that do not hide well, do not exceed 10%.

Note: Higher than 5% of color tint may reduce physical and chemical resistance properties of product.

MIX INSTRUCTIONS:

Carefully measure 2 parts A and 1 part B by volume and blend together for 2 minutes with a drill mixer. Proceed to application immediately after mixing.

Note: To extend the working time of product, pour all mix contents onto the floor and spread product with application squeegee.

APPLICATION (For general three-coat system):

PRIMING STEP: NF 450 clear priming application (*Refer to Penntek NF 450 technical data sheet for full details.*)

1. Use 8-12 mil notched applicator to spread NF 450 evenly over the floor (approximately 170 sq. ft./gallon). Then, back-roll the coating with wetted out 3/8" nap roller to obtain a uniform thickness.
2. Alternatively, IHE 4000 can be used as a primer in place of NF 450 and can be applied in the same manner. However, due to longer cure time, IHE 4000 may increase overall application time of entire system.
3. Coating must be tack-free and hard enough to walk on without sticking to shoes or leaving permanent imprinting prior to applying the IHE 4000 build-coat.

Note: If 20 hour recoat window has passed between primer application and build coat application, primer coat must be fully abraded and recleaned before installing build-coat.

BUILD COAT: IHE 4000 build-coat

1. If adding color tint, add premixed URX color tint at 5% total volume of mixed coating. Do not add color tint until after mixing part A and B for 15 seconds.
2. Use 15-20 mil notched applicator to spread IHE 4000 evenly over the floor (approximately 93 sq. ft./gallon). Then, back-roll the coating with wetted out 3/8" nap roller to obtain a uniform thickness.
3. Coating must be tack-free and hard enough to thoroughly abrade without clogging up sandpaper prior to applying topcoats.

TOPCOAT APPLICATION: Polyaspartic and/or polyurethane topcoats

Note: IHE 4000 must be fully abraded for proper appearance and adhesion.

- After fully abrading IHE 4000, vacuum up all dust prior to applying a urethane or polyaspartic topcoat. Refer to product Penntek technical data sheets prior to installation of topcoats.
- Recommended sanding procedure is fully abrading to uniform dullness with 60-80 grit sandpaper, followed by 120-150 grit sandpaper.

PRODUCT AND APPLICATION SUPPORT

Refer to the Penntek training manual or contact technical support line (952-491-0616) for further information.

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CHEMICAL RESISTANCE | 24 HOUR AND 30 MINUTE SPOT TESTING

CHEMICAL	24 HR RESULT	30 MIN RESULT
Acetic Acid 30%	1	
Acetic Acid 5%	1	
Acetone	1	
Ammonia 10%	5	
Battery Acid (Sulfuric Acid 37-40%)	1	
Betadine Solution	3*	4*
Brake Fluid	1	2
Citric Acid 20%	1	2
Cleaner (Formula 409®)	5	
Cleaner (Pine-Sol®)	1*	1
Cleaner (Pine-Sol® 3%)	3	4
Coffee	3*	
Cola	3	
Dish Soap (Dawn®)	4	
Dish Soap (Dawn® 1%)	5	
Ethylene Glycol / Antifreeze	5	
Gasoline	3	3
Glass Cleaner (Windex®)	4*	4
Glycerin	5	
Hand Sanitizer (Ethanol Based)	3	3
Household Bleach	2	5
Hydrochloric Acid 20%	1	
Hydrochloric Acid 5%	1	
Ice Melt 20% in water	5	
Isopropyl alcohol 99%	4	
Ketchup	2*	5
Mineral Spirits	5	
Motor Oil (Conventional)	5	
Motor Oil (Synthetic)	5	
Mustard	2*	3*
Phosphoric Acid 50%	1	
Phosphoric Acid 10%	1	
Roundup® Weed Killer	2	3
Simple Green™ d Pro 3 Plus	4	
Simple Green™ All Purpose	4	
Sodium Hydroxide 50%	5	
Skydrol LD-4®	3*	5
Sugar Solution 20%	5	
Water	5	
Windshield Washer Fluid	4	
Xylene	5	

KEY:

1 = Moderate/severe damage, does not recover
2 = Mild damage, does not recover
3 = Light damage, partially recovers

4 = Light damage, fully recovers
5 = No damage
 * = Staining