

NF 450 | MOISTURE MITIGATING EPOXY PRIMER

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

NF 450 is a moisture mitigating epoxy primer for use on concrete floors suspected to have high rates of moisture vapor transmission. NF 450 is designed to reduce issues associated with high vapor transmission such as delamination and poor adhesion.

TYPICAL USES/APPLICATIONS

- Moisture tolerant primer to increase adhesion to concrete in high moisture conditions.
- Moisture mitigating primer to reduce water vapor transmission.

PRODUCT ADVANTAGES

- Quick return to service
- Reduces vapor transmission
- Extreme Adhesion

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.

RECOMMENDED APPLICATION TEMPERATURE

55° - 100° F

*Product will not properly cure if floor temperature is below 55 degrees Fahrenheit.

COVERAGE

For Moisture Tolerant Primer:

146 - 178 sq.ft./gal. (9 - 11 mils)

For Moisture Mitigating Primer:

1st layer with 270 sq.ft./gal. (6 mils)

2nd layer with 89 - 100 sq.ft./gal. (16 - 18 mils)

TEST DATA

NONVOLATILE CONTENT (ASTM D2369 METHOD E): > 95%

VOC (FULL KIT): $< 20 \text{ g/L}$

WEIGHT PER GALLON(ASTM D1475):	
Part A:	9.49 lb/gal
Part B:	8.23 lb/gal

VISCOSITY (ASTM D7867):

Part A:	3000 cps
Part B:	100 cps

GEL TIME: 25 min

TACK FREE TIME (ASTM D5895):
15 mils, 50%RH 5.5 hrs

KÖNIG HARDNESS (ASTM D4366):

10 day:	150 s
30 day:	160 s

ADHESION (ASTM D4541):
10 day: >500 PSI (concrete failed)

WATER VAPOR TRANSMISSION (ASTM E96/E96M):
16 mils Permeability: < 0.3 US Perms

COMPRESSIVE STRENGTH (ASTM D695):
Tested at 73 °F Strength: 12400 psi

TENSILE STRENGTH/ELONGATION (ASTM D638):
Strength: 7959 psi
Elongation: 7.36%

FLAMMABILITY (ASTM D635): Average: 122.2 mm/min.

ALL TEST DATA COLLECTED AT 70° F

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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. Contaminants may lead to poor adhesion and coating surface defects such as craters and crawling. Fully vacuum all dust from the surface of the concrete slab after preparation.

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

To use NF 450, concrete must be visibly dry and dry to the touch. There must not be any dampness or standing water. Whenever possible, avoid installation of NF 450 in direct sunlight.

PRE-MIX REQUIREMENTS

Part A: Invert container 3 times prior to each use to ensure uniformity.

Part B: Not required.

MIX RATIO:

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

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.

Warning: Mix gets extremely hot when left in volume. Only mix what is needed and pour all of the material onto the floor.

APPLICATION

For Moisture Tolerant Primer:

- To extend the working time of the product, pour mixed material onto floor in a ribbon-like pattern. Apply approximately 160 sq.ft./gal (10 mils).

*Only mix as much material as is needed for desired coverage rate. Material will get extremely hot if left in volume.

1. Spread material evenly with an 8 – 12 mil notched squeegee and back roll with a 3/8" nap roller.
2. Material must be tack free before applying the next layer.
3. Working time of the coating is reduced under high temperature and high humidity conditions.

For Moisture Mitigating Primer:

- To extend the working time of the product, pour mixed material onto floor in a ribbon-like pattern. Apply approximately 270 sq.ft./gal. (6 mils).

*Only mix as much material as is needed for desired coverage rate. Material will get extremely hot if left in volume.

1. Spread material evenly with a 5 – 7 mil notched squeegee and back roll with a 3/8" nap roller.
2. Material must be tack free before applying the next layer.
3. Apply a second layer of material at a coverage rate of 95 sq.ft./gal. (17 mils).
4. Spread material with a 15 – 20 mil notched squeegee and back roll with a 3/8" nap roller.
5. Work time of coating is reduced under high temperature and high humidity conditions.
6. Material must cure for 12 hours before applying the next layer.
7. Next layer must be applied within 20 hours. For more than 20 hours surface will need to be sanded before next layer can be applied.
8. Recommended sanding procedure is fully abrading to uniform dullness with 60-80 grit sandpaper, followed by 120-150 grit sandpaper.

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PRODUCT AND APPLICATION SUPPORT

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

TIPS AND TRICKS

- If left with an excess of material in the mix bucket. Fill the remaining space in bucket with water to cool down the heat generation.