

Nu-Klad® 100A

Spray-on epoxy surfacer

Product Data/ Application Instructions

- VOC compliant
- Low temperature (below 65°F) application with accelerator
- Sprayable, epoxy monolithic surfacer
- Eliminates troweling, reduces labor costs
- Excellent adhesion
- Resists a wide range of acids, alkalis and solvents
- Indoor or outdoor use
- Dense film composition withstands abrasion and heavy traffic

Nu-Klad 100A provides a long-lasting protection both indoors and outdoors to concrete floors, walls and overhead surfaces exposed to harsh environments within the recommended chemical resistance and temperature limitations. It adheres tightly to the primed concrete substrate, consequently, any cracking of the concrete will result in simultaneous cracking of the epoxy surfacer. Nu-Klad 100A is subject to discoloration on exposure to sunlight or certain chemicals; however performance is not affected. Refer to Amercoat Chemical Resistance Chart or contact your PPG representative.

Typical Uses

- Mining and metal finish operations
- Chemical processing plants
- Power facilities
- Sewage and waste water treatment plants
- Pulp and paper, textile and steel mills

Typical Properties after 7 days @ 70°F (21°C)

Mechanical

Density (ASTM D71 modified)	113 lbs/ft ³
Tensile strength (ASTM C307)	2090 psi
Compressive strength (ASTM C579)	9350 psi
Flexural strength (ASTM C580)	4820 psi
Modulus of elasticity (ASTM C580)	7.4 psi x 10 ⁵

Physical Data

Color	Gray	
Components	3	
Curing mechanism	Chemical reaction between components.	
Recommended thickness per coat		
splash and spill	½ in (3mm)	
heavy physical abuse	¾ in (5mm)	
Coats	1	
Calculated coverage per unit	ft ²	m ²
½ in (3mm)	42.9	3.9
¾ in (5mm)	27.9	2.6
VOC mixed	0.03 lb/gal	3.6 g/L
Flash point (SETA)	°F	°C
cure	>200	>93
resin	174	79
Amercoat® 104 cleaner	176	80

Application Data

Applied over	Primed concrete		
Primer	Amerlock Sealer		
Filler	Amercoat 114A		
Method	Spray		
Pot life (hours)	°F/°C		
	90/32	70/21	50/10
	½	¾	1½
Setting time (hours)	°F/°C		
	90/32	70/21	50/10
	6	10	24
Environmental conditions			
Temperature	°F	°C	
air and surface	40 to 90	5 to 32	
material	65 to 90	18 to 32	
Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation.			
Time before service @ ½ in (days)	°F/°C		
	90/32	70/21	50/10
	1	2	8
Equipment cleaner	Amercoat 104		

Formerly Nu-Klad 100A

Environmental Conditions

Temperature	°F	°C
air and surface	40 to 90	5 to 32
material	65 to 90	18 to 32

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation.

Material conditions – Store material between 65 to 90°F for 48 hours prior to use. Material below 65°F becomes difficult to handle and could cause spray equipment to break down. Above 80°F the working time decreases. Surface roughness and surface temperature will influence flow, below 70°F additional thickness will improve surface smoothness.

Surface Preparation

Refer to concrete surface preparation for primer or filler being used. Coating performance is, in general, proportional to the degree of surface preparation.

The primed or filled concrete surface must be clean, dry and free of contaminants such as dust, dirt, grease, or oil. Nu-Klad 100A must be applied over Amerlock Sealer, or recommended primer. Amerlock Sealer may be wet (tacky) or dry. Apply Nu-Klad 100A as follows after applying Amerlock Sealer.

	°F/°C		
	90/32	70/21	50/10
within (days)	3	7	10

On poured concrete walls and overhead surfaces, fill voids using Amercoat 114A filler compound before applying Nu-Klad 100A. Amercoat 114A which has cured beyond 3 days must be roughened. Nu-Klad 100A which has cured beyond 7 days must be roughened before applying additional 100A.

Equipment

The following equipment is recommended; other equipment which provides a proper application may be used:

1. Moyno pump equipped with a hopper, variable-speed air motor and spray guns with material lines such as “Super Texan B” modified for epoxy surfacers.
2. Quikspray Carousel pump equipped with a hopper, spray gun and material lines, Model No. 1025GFC-3-GAM.
3. Bottom feed pressure pot with pole gun, such as Binks 10-gal pressure pot, Model No. 83-5362, with follower plate and air control 83-104, fluid hose 71-3362-1 inch, pole gun model 125 with 49 x ½ fluid nozzle.
4. For small or repair areas, use a hand held hopper gun, such as Quikspray Model 60AT.

Mixer – Such as Jiffy Mud and Resin Mixer or Foldstir Mixer, each with ½-inch shaft and a suitable power drill.

Mixing Procedure

Nu-Klad 100A is supplied in the correct proportions of resin, cure and powder which must be mixed together before use. See Application Procedure. Mix only full units. Make no additions or deletions. Deviations from packaged components will inhibit curing and alter final physical properties. Nu-Klad 100A is ready for use immediately after mixing; no induction time is required. Do not mix more material than can be used within the working time; ¾ hours at 70°F. Material which has begun to set is unsatisfactory and must be discarded.

Pot life (hours)	°F/°C		
	90/32	70/21	50/10
	½	¾	1½

1. Add cure to resin and stir thoroughly.
2. Continue to stir resin/cure mixture while adding powder. Mix thoroughly using a power mud mixer with explosion-proof power drill.

Application Procedure

1. Mix a unit of resin and cure for lubricating the material line as per general mixing procedure. (Do not add powder).
2. Pump lubricant material through pump and delivery hose collecting material in a 5-gallon can. Continue pumping until all lubricant (resin and cure) is removed from material line, follow lubricant material with a mixed unit of resin, cure and powder; then begin application of the 3-component mixed Nu-Klad 100A.

Note: Add unit powder to collected lubricant material immediate and mix thoroughly before spraying this material. Use mixed material immediately.

3. Spray in even, parallel passes; overlap each pass 50 percent to avoid holidays, bare areas and pinholes. Cross spray at right angles to first pass until specified thickness is achieved.

Setting time (hours)	°F/°C		
	90/32	70/21	50/10
	6	10	24

4. Periodically check during application for specified thickness with a steel rule depth gauge or other suitable wet film thickness gauge.
5. At surface temperatures of 80°F or above, two coats of Nu-Klad 100A may be required to achieve ⅜ inch thickness on vertical surfaces. Make the first application at ⅛ inch (3mm) and allow to cure overnight at 70°F. Make second application at ⅜ inch (1.5mm) and within 24 hours after first application.

Time before service @ ⅛ in (3mm) (days)	°F/°C		
	90/32	70/21	50/10
	1	2	8

6. Clean equipment with Amercoat 104 immediately after use.

Cleanup

Immediately after use, clean all application tools and spray nozzle with Amercoat 104 cleaner followed by a clean water rinse. Clean pump by pouring a unit of Amercoat 104 cleaner into hopper following Nu-Klad 100A and run through until Nu-Klad 100A is removed from material line. Pour a second unit of Amercoat 104 cleaner into the hopper and continue circulating to remove any remaining 100A. Follow with a clean water rinse. For thorough cleaning of material line, disassemble and clean by attaching a rag to a piece of wire and pulling rag through the line several times to remove any loose deposits from the side walls. Flush with water. A spare material line is recommended so one line can be thoroughly cleaned while the other is in use. Utilizing two lines will ensure that each day's production begins with a clean line and also allow for close inspection of the lines for wear.

Repair

Reapply over clean surface up to 7 days. Roughen surface after 7 days.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

CAUTION – Improper use and handling of this product can be hazardous to health.

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep spray mists and vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. PPG makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which PPG is unaware and over which it has no control.

If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

This product is for professional use only. Not for residential use.

Shipping Data

Packaging	53.8 lb unit
cure	5.1 lbs in 1-gal can
resin	8.7 lbs in 5-gal can
powder	40 lbs in 3-gal container
Shipping weight (approx)	58.5 lbs 26.6 kg
Freight classification	Acid-proof building cement
Shelf life when stored indoors at 40 to 100°F (4 to 38°C) in unopened, tightly sealed containers	1 year from shipment date

Numerical values are subject to normal manufacturing tolerances, colors and testing variances. Allow for application losses and surface irregularities.

The mixed product is nonphotochemically reactive as defined by the South Coast Air Quality Management District's Rule 102 or equivalent regulations.



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One PPG Place, Pittsburgh, PA 15272 • Tel: 888-9PPGPMC