



Nu-Klad 105

Primer and Sealer

Product Data/ Application Instructions

- **Primer for concrete surfaces prior to application of Nu-Klad 100A, and epoxy surfacers and finishes**

Typical Uses

A primer and sealer prior to application of a number of epoxy based surfacers and finishes on concrete in chemical processing plants; power, sewage, and waste treatment plants; pulp and paper, textile and steel mills; and mining and metal finishing operations.

Recommended Systems

Nu-Klad 105 primer and sealer is recommended for priming and sealing concrete surfaces for Nu-Klad 100A and epoxy surfacers and topcoats. Nu-Klad 105 is compatible with damp concrete surfaces. Nu-Klad 105 can also be used as a liquid membrane curing compound for concrete and meets the moisture retention requirements of ASTM C309.

Application Data Summary

Like all high-performance coatings, Nu-Klad 105 must be applied as recommended to obtain the maximum protection for which this coating is formulated.

Physical Data

Colour	black
Components	2
Mixing ratio (by weight)	
resin	4 kg
cure	1 kg
Curing mechanism	chemical reaction between components
Volume solids	100%
VOC	0
Number of coats	1
Coverage per unit	15-40 m ² depending on surface and application method
Specific gravity	1.14 kg/l (mixed product)
Flash points	
(Closed Cup).....	°C °F
resin	64 147
cure	64 147
Amercoat 9HF	26 79
Amercoat 12	24 75

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Concrete

All concrete surfaces to be coated must be strong and sound; must contain no additives or hardeners, and should not be treated with sealers or conventional curing compounds containing waxes, silicones or silicates. New slabs (horizontal surfaces) to be cured with Nu-Klad 105 should have a float finish or broom finish as described in American Concrete Institute, specification 301. Finishing shall be within Class A tolerance. For existing slabs with a trowelled finish, see **Surface Preparation**. Formed surfaces should be adequately vibrated to minimize air pockets and holes. Suitable form facing material should be used to produce a smooth form finish as described in American Concrete Institute, Specification 301. Do not use form release agents based on oils, which will deposit a residue on the concrete. When Nu-Klad 105 is used as a curing compound the forms should be removed within three days.

Surface Preparation Water-Cured Concrete or Existing Structures

Must be cured a minimum of 14 days under favorable temperature and moisture conditions and have attained 80% of its final strength. When cured, surface must be abrasive blasted. As an alternative, in case abrasive blasting is not possible acid etching might be used. It must be noted that acid etching is not advised in case the Nu-Klad 105 is used in combination with a coating system intended for immersion purposes. A suitably finished, abrasive blasted surface must have a uniform surface texture exposing fine aggregate resembling coarse sandpaper. Concrete surfaces which have been cured with conventional curing compounds or are contaminated with form oils must be completely cleaned by abrasive blasting. Acid etching is not acceptable, as it will not normally remove these contaminants.

Concrete to be cured with Nu-Klad 105

New concrete which will be cured with Nu-Klad 105 does not require blasting or etching. It is only necessary to remove fins and projections from formed concrete. Ensure that all surfaces are free from oil or contaminants. Nu-Klad 105 should be applied as soon as possible after pouring or finishing of concrete, as described under **Application as a curing compound**.

Mixing

Nu-Klad 105 is packaged in 5 kg units of the proper proportions of resin and hardener which must be mixed together before use. A power mixer is recommended, such as 1/4 inch Jiffy Mud and Resin Mixer chucked into a 1/4 inch or 3/8 inch variable speed drill with an explosion proof motor. Mix only full units, one at a time. Thoroughly stir both components before combining. Empty the hardener into the resin component container and mix thoroughly until the hardener has been completely dispersed. Immediately after mixing, Nu-Klad 105 is ready for use. For brush, roller or squeegee application, do not add any type of thinner. For airless spray application, Nu-Klad 105 can be thinned using up to 25% of Amercoat 9HF thinner. When using airless spray, it may be desirable to mix two units to provide sufficient material to fill the pump. Do not mix more material than can be used within the working time one hour at 23°C/73°F. Nu-Klad 105 cures by chemical reaction between components. Combining more than two mixed units at one time reduces working time. Material which has begun to set must be discarded.

Application Data

Substrate	concrete
Application methods	brush, roller, spray, squeegee
Potlife time (at 20°C/68°F)	1 hour
Initial setting time (at 20°C/68°F)	17 hours
Induction time (at 20°C/68°F)	not applicable

Environmental Conditions

Optimum temperatures for handling and using Nu-Klad 105 are between 18 and 27°C (64 and 81°F). Store material within this range for 48 hours prior to use. Below 18°C/64°F the application becomes more difficult and the coverage is reduced. Above 27°C/81°F the working time decreases.

Nu-Klad 105 can be applied to concrete surfaces as cool as 10°C/50°F; although curing is retarded, typical properties of the cured material are not affected. It can be applied to concrete surfaces as warm as 32°C/90°F; however, on vertical surfaces it may have a tendency to run or sag.

Thinner	Amercoat 9HF
Cleaner	Amercoat 12

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Application

Apply Nu-Klad 105 over a damp surface. Abrasive blasted concrete must be thoroughly cleaned to remove all loose material, then moistened with water. On slabs, puddled areas of water must not remain. On formed surfaces no running water may be evident. For brush application, use a pure bristle or nylon bristle brush; for roller application, use a short-nap mohair roller with a non degradable core. Apply a thin coat to the surface and work in vigorously. Cross brushing or cross rolling is recommended. For spray application, airless equipment is recommended such as Graco Bulldog Hydro-Spray or similar with a 0.43 mm (0.17inch) fluid tip. Material may be thinned with up to 25% of Amercoat 9HF Thinner. Apply a thin coat to the surface in parallel passes, overlapping each pass 50 percent. On slabs (horizontal) any primer/sealer which had puddled in low areas (depressions in concrete plane) must be brushed out during application. On formed surfaces (verticals) any primer/sealer which runs or sags must be brushed out during application. One 5 kg unit of Nu-Klad 105 Primer/ Sealer will cover approximately 15-40 m². of the concrete surface. The Coverage will vary depending upon the density or porosity denser the surface, the greater the coverage; the more porous the surface the lower the coverage. An even wet coat must be applied over the entire surface. After overnight curing, the coated surface may vary in appearance. Areas which appear to have no evidence of primer/sealer indicate a high porosity. In these areas, a second application is recommended. Surfaces not properly primed or sealed may result in bubbling of surfacer.

Application as a curing compound

When used as a curing compound, Nu-Klad 105 must be applied to slabs (horizontal) immediately after the final finishing operation or upon disappearance of the 'sheen' of surface moisture. On formed surfaces (verticals), apply immediately after form is removed. (Forms should be removed within three days after concrete is poured). If there is any drying or appreciable loss of moisture, spray the surface with water and allow to reach a uniform damp condition with no excess water on the surface.

Clean-up

Immediately after use, clean all application equipment with Amercoat 12 cleaner.

Shipping Data

Packaging	
resin	4 kg in 5 l can
cure	1 kg in 1 l can
Shipping weight	approx. 5.6 kg
Shelf life	1 year from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F).

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Caution

Nu-Klad 105 resin and cure are combustible and may cause skin and eye irritation. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged breathing of vapor. If used in confined areas circulate adequate fresh air continuously during application. Avoid contact with skin or eyes. Do not take internally. In case of contact, immediately flush skin with plenty of water; for eyes, flush with plenty of water for at least 15 minutes and get medical attention.

For specific information on hazardous ingredients, required ventilation, possible consequences of contact, and safety measures see Safety Data Sheet.

Safety

Since improper use and handling can be hazardous to health and cause of fire or explosion, safety precautions included with Product Data/Application Instruction and Material Safety Data Sheet must be observed during all storage, handling, use and drying periods.

Warranty

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron's option, to either replacement of products not conforming this warranty or credit to Buyer's account in the invoiced amount of the non-conforming products. Any claim under this warranty must be made by Buyer to Ameron in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify Ameron of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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Condition of Sale

All our transactions are subject to our Terms and Conditions of Sale.