

# Nu-Klad 114A

## Epoxy Filler Compound

### Product Data/ Application Instructions

- **Excellent surfacer for concrete and steel surfaces**
- **Fills and seals most voids and air pockets in single application**
- **Easily mixed and applied**

#### Characteristics

Nu-Klad 114A is a 100% solids epoxy filler compound to fill holes, voids and surface discontinuities in concrete up to ± 20mm across as measured in the largest dimension. A single application will fill or seal most air pockets and holes. On concrete block surfaces, Nu-Klad 114A provides a smooth surface for applying coatings or Nu-Klad 100A spray-on epoxy cladding.

#### Typical Uses

It is applied in nuclear facilities, fossil fuel plants, sewage and waste treatment plants, food and beverage plants, chemical processing plants, pulp and paper mills, textile mills, steel mills, and mining and metal finishing operations.

#### Physical Data

Finish .....	smooth
Colour .....	off white*
Components .....	2
Mixing ratio (by weight)	
resin .....	2.8 parts
cure .....	1 part

Mix only full units. Make no additions or deletions. Any deviations will inhibit curing and alter final physical properties. Do not mix more material than can be used within the potlife. Material which has begun to set is unsatisfactory and must be discarded.

Curing mechanism .....	chemical reaction between components
Volume solids .....	100%
VOC**	
EC SED 1999/13/EC .....	2 g/kg (4 g/l)
Number of coats .....	1
Calculated coverage .....	28 m <sup>2</sup> /kg at 25 µm

Based on application over a smooth and flat surface, not including material for filling or air pockets, voids or holes.

Specific gravity .....	1.42 kg/l (mixed product)
Flash points (Closed Cup).....	°C      °F
Nu-Klad 114A cure .....	93      199
Nu-Klad 114A resin .....	93      199
Amercoat 12 .....	24      75

#### Typical Properties (after 7 days at 20°C/68°F)

Tensile strength (ASTM D412) .....	21 N/mm <sup>2</sup>
Compressive strength (ASTM C579) .....	88 N/mm <sup>2</sup>
Modulus of elasticity (ASTM C580) .....	66.00 N/mm <sup>2</sup>

\*Surface discolouration occurs on exposure to sunlight or certain chemical agents. However, product performance is not affected .

\*\* VOC figures are quoted according to both the EC directive 1999/13/EC which are theoretically calculated figures and the UK PG6/23(92) Appendix 3 which are practically determined figures.

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## Surface Preparation

Coating performance, in general, is proportional to the degree of surface preparation. Prior to coating, all surfaces must be clean, undamaged, dry and free of all contaminants, including salt deposits.

STEEL - Prepare surface in accordance with Application Instructions for specific primer being used.

Concrete must cure a minimum of 14 days and must have attained 80 percent of its physical properties before application of Nu-Klad 114A.

Formed surfaces (verticals and overheads) must be adequately vibrated to minimize air bubbles and holes.

Select a form facing material which will produce a smooth, hard uniform texture on the concrete. Do not use form release agents, such as form oils, that will deposit a residue on the concrete surface. Use only film forming release agents that will not impart residues onto the surface. Repair all defects. All fins and projections must be completely removed. Air blast formed surfaces using high pressure 7 kg/cm<sup>2</sup> compressed air to open air bubbles or holes crusted over with a thin laitence layer. High pressure air line must be equipped with operating oil and moisture separators.

## Application

Apply Nu-Klad 114A epoxy filler compound to the surface using a short nap paint roller or trowel. Spread and work the filler compound across the surface filling the voids using a floor trowel or wide bladed putty knife. Continue working the filler compound across the surface, applying pressure to achieve a smooth finish. Leave only a slight film above the surface plane.

The filler compound should appear somewhat transparent allowing the concrete surface or concrete block texture to remain visible.

A single application will provide a suitable surface to receive Nu-Klad 100A epoxy surfacing or for application of a coating over concrete block. For complete filling and sealing of formed concrete surfaces to receive Amercoat protective coatings, a second application may be required. Allow overnight curing at 20°C/68°F, or until first application is set. Do not exceed three days at 20°C/68°F before the second application. When making second application, use only reasonable pressure to build the film thickness to approximately 125 to 250 µm above the surface plane, and at the same time remove ridges left during spreading of the filler compound by the application tool. Repair all holidays with Nu-Klad 114A before applying coating.

## Application Data Summary

Like all high performance coatings, Nu-Klad 114A must be applied as recommended to obtain the maximum protection for which this product is formulated. If conditions exist that are not within the requirements or limitations described, consult your PPG representative.

## Application Data

Substrate ..... concrete, steel, masonry

Application methods ..... squeegee, roller, trowel, spatula

### Environmental Conditions

Optimum material and surface temperatures are between 18 and 27°C (64 and 81°F). Store material within this range prior to use. Below 18°C/64°F workability is reduced and application more difficult. Above 27°C/81°F the working time decreases.

Nu-Klad 114A can be applied to surfaces that are as low as 10°C/50°F; although curing will be retarded, typical properties of the cured Nu-Klad will not be affected.

Application under direct sunlight and rising surface temperatures can result in bubbling of the filler compound due to release of air or moisture from the concrete. Shade concrete that has been exposed to direct sunlight for 24 hours prior to application of Nu-Klad 114A, and keep shaded until after initial set has taken place. Where surface temperatures are rising, it may be necessary to postpone application.

Potlife (at 20°C/68°F) ..... 2½ hours (ASTM C308)

Potlife is dependent on temperature and quantities mixed.

Initial setting time (at 20°C/68°F) 18 hours (ASTM C308)

Drying times (at 20°C/68°F)(before topcoating)

minimum ..... 18 hours

maximum with

Nu-Klad 114A ..... 72 hours

Nu-Klad 100A ..... 168 hours

If maximum recoat time has been exceeded, roughen surfaces.

Induction time (at 20°C/68°F) not applicable

Cleaner ..... Amercoat 12

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## Curing time before overcoating

For solvent containing epoxy coatings the minimum curing time for Nu-Klad 114A is 18 hours and the maximum curing time is 6 months.

For solvent free epoxy materials such as Nu-Klad 100 A the minimum curing time is 18 hours and the maximum curing time is 7 days for indoor exposure and 3 days for Nu-Klad 114A which has cured outdoors.

If maximum time is exceeded the surfaces must be roughened by abrasive blasting or mechanical means.

## Clean-Up

Immediately after use, clean all mixing equipment and application tools with Amercoat 12.

## Shipping Data

### Packaging

resin ..... 5.34 kg in 5 l can  
cure ..... 1.90 kg in 2½ l can

### Shipping weight

resin ..... approx. 6 kg  
cure ..... approx. 2½ 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

This product is combustible. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the health:

- 1 circulate adequate fresh air continuously during application and drying;
- 2 use fresh air masks and explosion proof equipment;
- 3 prohibit all flames, sparks, welding and smoking.

Do not empty into drains. Take precautionary measures against static discharges. For specific information on hazardous ingredients, required ventilation, possible consequences of contact, exposure 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

PPG warrants its products to be free from defects in material and workmanship. PPG's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at PPG'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 PPG 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 PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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