

10<sup>-9</sup>

- > Bridges, Road Barriers, Noise Walls  
Tunnels, Marine Developments
- > Pre-cast Buildings



> Concrete Coating

## NK-TC 01 Decorative Protective Coating for Concrete

- > Single process application
- > Approved by Road Authorities for anti-carbonation and permanent anti-graffiti protection
- > Extends the life of concrete assets

NK-TC 01 is a coating material that exhibits very high abrasion resistance, high chemical resistance and easy to clean surface properties. The coating material is applied to concrete and cement based substrates to give an opaque satin-gloss or matt finish. The coating provides excellent long-term protection against concrete cancer and corrosion. The coated surface also behaves as an excellent anti graffiti surface, whereby environmentally friendly citrus cleaners can be used to effortlessly remove repeated graffiti attacks.

Features include : \* One coat or two coat wet on wet process (no priming) \* Exceptionally strong bond with concrete \* Excellent hiding characteristics on both concrete and old coatings \* High weather resistance \* UV stable \* Stable against salt spray \* Excellent carbon dioxide resistance \* Excellent water vapour diffusivity \* Hydrophobic, self cleaning surface \* Excellent barrier to water ingress \* Excellent barrier to chloride ions \* Excellent anti-graffiti performance.



Feature	ProGuard	Typical Competitor
No. of coats	1	3
Difficulty to prepare concrete for coating	One step (high pressure clean only). No priming	Multiple steps
Risk of defective application	Very low	Medium
Easy to clean property	*****	*
Pollution Removal	*****	*
Solvent / chemical resistance	*****	None
Bond strength with substrate	*****	*
Anti-graffiti performance	*****	*

## ProGuard NK-TC 01

### Technical:

Delivery form:	2 part product (Part A + Part B)
Finish & Colour:	Satin or Matt. White, Grey, Yellow, Red (additional colours possible)
Type of binder:	Polysiloxane-Polyepoxy-Resin
Solids-content:	> 95 % by weight
Density:	1.59 kg / dm <sup>3</sup> (Part A), 0.99 kg / dm <sup>3</sup> (Part B), 1.5 kg / dm <sup>3</sup> (Mixture)
Theoretical spreading rate:	7.92 - 4.75 m <sup>2</sup> /kg at 120 to 200 microns dry film. Practical spread rate will depend on the method of application and the surface roughness.
Thermal resistance:	-20 °C to +150 °C
Shelf life:	At least 12 months in closed original can, stored in cool, dry conditions.

### Processing:

Surface treatment:	NK-TC 01 can be applied mechanically or manually in a single process (single coat or wet on wet application) without using a primer. The surface must be dry and free of dirt, dust and grease. Loose impediments must be removed before coating application. On cracked surfaces crack-closing pre-treatment is necessary. A small test square should be applied first in all instances.
Application:	Substrate temperature: Min. +5°C, max. + 30°C
Air temperature:	Min. +3°C, max. + 30°C
Relative humidity:	Max. 95 %
Mixing:	Part A : Part B = 6 : 1 by weight Part A must be stirred before the addition of Part B. After addition of Part B the mixture must be stirred well for about 5 minutes or until the coating material is homogeneous. Application with airless-spraying, rolling or brush. Tools must be cleaned immediately after use with thinner.
Thinning:	NK-TC 01 can be thinned up to 10% with an industrial two pack epoxy thinner.
Potlife (25°C):	4 hours
Drying times (25°C):	Touch : 2 hours ; Through : 16 hours ; Full cure : 7 days
Coating thickness :	WFT 138 micron = DFT 120 micron ; WFT 230 micron = DFT 200 microns
VOC :	63.57 g/L

### Independent Test Results by SGS Australia and ARRB Group Pty Ltd:

- Pull-Off Adhesion on Concrete : >3.5 MPa (cohesive failure of concrete)
- Initial Surface Absorption Test (ISAT : BS1881:Part 208: 1996) : No measurable water flow
- Water Vapour Transmission (ASTM E96-05): Equivalent Air Layer Thickness S<sub>D</sub> : 3 m
- Water Vapour Transmission (ASTM E96-05) after 2000 hrs QUV: Equivalent Air Layer Thickness S<sub>D</sub> : 3 m
- Carbon Dioxide Diffusion Coefficient (AS/NZS 4548.5-1999): Equivalent Air Layer Thickness R : 717 m  
: Equivalent Thickness of Concrete S<sub>c</sub> : 179 cm
- Durability: This product maintains coating integrity as described in the table below after QUV / Condensation cyclic exposure to 3000 hrs in accordance with ASTM D4587.

Australian Standard	Description	Scale (0 - 5), 0 being best
AS 1580.481.1.2:1998	Discolouration on Pure White	0 - 1
AS 1580.481.1.3:1998	Degree of Dirt Collection	0
AS 1580.481.1.4:1998	Degree of Dirt Retention	0
AS 1580.481.1.7:1998	Degree of Checking	0
AS 1580.481.1.5:1999 (clause 7.2)	Change in Gloss (Visual)	4
AS 1580.481.1.8:1998	Degree of Cracking	0
AS 1580.481.1.9:1998	Degree of Blistering	0
AS 1580.481.1.10:1998	Degree of Flaking & Peeling	0
AS 1580.481.1.11:1998	Degree of Chalking	0
AS 1580.481.1.12:1998	Degree of Colour Change on Pure White	0 - 1

The information in this data sheet is based on the current status of technical development as well as experience with the product. However, given the variety of surfaces and ambient conditions, the information provided on this data sheet shall in no way diminish the responsibility of the user to ensure with due care, that our product is suited for the intended purpose, surface and application conditions. Note in particular, that we accept no liability in cases where we have not explicitly stated application purposes and types of use. This data sheet will be superseded by any later version released. As at 06/11.