



CONSOL PN 63

High Build Coating Material

DESCRIPTION

A two component solvent-free, highly cross linked, high build phenol epoxy novolac based coating. **CONSOL PN 63** can be applied by brush, roller, or airless spray. It is formulated to be applied in one or two coats to achieve minimum total dry film thickness of 500 microns, higher thickness can be specified.

RECOMENDED FOR

CONSOL PN 63 is an Epoxy Novolac lining designed to provide protection to concrete and steel structures in aggressive chemical conditions.

The material is particularly suitable in:

- waste water treatment plants
- desalination plants
- food processing plants
- pump and paper mills
- electric power plants
- chemical manufacturing plants
- fertilizer and insecticide plants and,
- petroleum refineries.

BENEFITS

- **CONSOL PN 63** is 100% solids, no solvents.
- **CONSOL PN 63** exhibits excellent chemical resistance in pH ranging from 1 -14 at 25°C.
- **CONSOL PN 63** has excellent adhesion to properly prepared concrete, mild steel, and other substrates.
- **CONSOL PN 63** has excellent abrasion resistance.

PRODUCT DATA

Form

Liquid

Appearance

Resin - part A : Coloured or transparent liquid

Hardener - Part B : Transparent, liquid

- Available only in the following standard colours: RAL 7032, 1001, 6010 & 6011 (refer to standard colour chart)
- Under direct sun radiation there may be some discolouration and colour deviation, this has not influence on the function and performance of the coating.

Density

Mixed Resin: ~ 1,11 ± 0.01 kg/L

Packaging

Part A: 6.25 kg

Part B: 3.75 kg

Storage

Dry, shaded place. Protect from direct sunlight and frost

Shelf- Life

12 months from date of production if stored properly in original, unopened and undamaged sealed packing, in dry conditions at temperatures between ±18 °C and under 30 °C.

TECHNICAL DATA

Chemical Base

Epoxy, Solvent-free

Coverage

Material consumption approx. 0.3 – 1 kg/m² depends on substrate conditions

Chemical Base

Resistant to manychemicals

Solid Content

100 %

Finish

Glossy

Mixing Ratio (A : B)

100 : 60

Pot Life

45 min. At 23⁰ C

20 min. At 35⁰ C

Track Time

8-10 hours at 23⁰ C

4-6 hours at 35⁰ C



Over Coating Time

< 16 hours at 23° C
< 10 hours at 35° C

Fully Cured

7 days at 23° C
5 days at 35° C

Tensile Strength

40 MPa

Elongation

Approx. 3%

Flexural Strength

60 MPa

Comp. Strength

60 MPa

Shore D Hardness

80 - 82

INSTRUCTION FOR USE

Preparation of Concrete Surface

All surfaces, which are to receive the lining, must be at least 28 days old and have a moisture content of less than 5%. These surfaces shall be dry, sound and free from debris and loose material. The substrate must be free from contamination such as oil, grease, wax, dirt or any other form of foreign matter which might affect.

Preparation

All surfaces should be grit blasted to meet the requirements of Swedish Standard SA 2.5. The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

Priming

CONSOL PN 63 is designed to be used without primer. However, if the condition of the concrete substrate requires priming, Consol Floor 162 can be used.

Mixing

It is imperative that the resin be thoroughly mixed with the hardener in the exact ratios to ensure optimum performance. Therefore, the entire contents of the hardener can should be added to the base container and mixed until a uniform colour and consistency are obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed using a Jiffy mixer on a slow speed electric drill.

Application

Once mixed, **CONSOL PN 63** should be immediately applied to the prepared surface ensuring a continuous coating of uniform thickness is obtained. Stiff nylon brush or short nap roller is recommended for such application. Faster rate of application is possible using airless spray equipment.

Re-Coating

To re-coat, it is imperative that the second coat be applied within the specified over-coating time.

Use of KKI Anti-Slip Grains

CONSOL PN 63 can be used in conjunction with KKI Anti-slip Grains to provide a heavy-duty slip-resistant flooring system. The first coat will be applied as described above with a minimum film thickness of 200 microns. The base coat should now be dressed with the chosen KKI Anti-slip Grains. The recommended procedure is to completely blind the base coat i.e. apply excess dressing aggregate to completely obliterate the base coat. When the base coat has reached initial cure, the excess KKI Anti-slip Grains should be vacuum-cleaned from the surface. The top coat can then be applied. Care should be taken to ensure that a continuous film is achieved and the surface is completely sealed.

Cleaning

CONSOL PN 63 should be removed from tools and equipment with KKI Solvent immediately after use. Cured material can only be removed mechanically.

APPLICATION METHOD/ TOOLS

By brush or roller.

CLEANING

Clean the tools and equipment immediately after use.

LIMITATION

- Substrate, ambient and product temperature must remain above 15°C during application and curing. Minimum material/container temperature for spray application is 20°C. Avoid moisture contamination.
- Application should not be undertaken if the temperature is below 5°C, or is 5°C and falling, nor when the prevailing relative humidity exceeds 90%.
- **CONSOL PN 63** may not be colour stable when in contact with some chemicals or direct sunlight. The colour change will not affect the performance of the protective system either on concrete or steel.

CONSOL PN 63

Table of Chemical Resistance

Test Medium	Test Temp. (C)	Exposure period and performance rating					
		1 d	7 d	30 d	2 m	6 m	12 m
Acetic ester	20	E	F	G	-	-	-
Ammoniac 10%	20	E	E	E	EH	EH	EH
	40	E	E	EH	EH	EH	EH
Acetic acid 20%	20	E	E	G	-	-	-
	40	E	E	G	-	-	-
Formic acid 10%	20	E	E	E	E	E	E
Chromic acid 20%	20	EH	G	-	-	-	-
	40	EH	G	-	-	-	-
Liquid manure	20	E	E	E	E	E	E
	40	E	E	E	E	E	EH
Acetone	20	E	G	-	-	-	-
Detergents (e.g.liquid)	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Ethanol	20	E	E	E	F	G	-
	40	E	F	G	-	-	-

Ethanol/water 60:40	20	E	E	E	E	E	E
Iron-II-sulphate solution 35%	20	E	EH	EH	EH	EH	EH
	40	E	EH	EH	EH	EH	EH
Iron-III-chloride solution 35%	20	E	E	EH	EH	EH	EH
	40	E	E	EH	EH	EH	EH
Acrylonitrile	20	E	E	E	E	E	E
Distilled water	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
	60	E	E	E	EH	EH	EH
Benzene/toluene/xylene	20	E	E	E	E	E	G
Petrol (EMPA/TTV) (15% methanol)	20	E	E	E	E	E	E
	40	E	E	E	E	E	EH
Nitric acid 20%	20	EH	EH	EH	EH	EH	EH
	40	EH	EH	G	-	-	-
Potassium permanganate 10%	20	E	E	EH	EH	EH	EH
Fuel oil (EMPA)	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
	60	E	E	E	E	E	E
Caustic soda	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Citric acid 20%	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Styrene	20	E	E	E	E	E	F
Javelle water 14%	20	E	E	E	FH	FH	G
Hydrogen peroxide 5%	20	E	E	E	E	F	F
Fuel oil	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
	60	E	E	E	E	E	E

Hydraulic fluids	20	E	E	E	F	F	F
	40	E	E	F	F	F	F
Cement water (saturated)	20	E	E	E	E	E	E
	40	E	E	E	E	E	EH
Kerosene	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Sodium sulphite solution (saturated)	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Water	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
	60	E	E	E	F	F	F
Hydrochloric acid concentrated	20	E	EH	EH	EH	EH	G
	40	EH	EH	EH	FH	G	-
Lactic acid 20%	20	E	E	E	E	EH	EH
	40	E	E	EH	EH	EH	G
Phosphoric acid 40%	20	E	EH	EH	EH	EH	EH
	40	E	EH	EH	EH	G	-
Sodium chloride solution (saturated)	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Oxalic acid 10%	20	E	E	EH	EH	EH	EH
	40	E	EH	EH	EH	EH	EH
Tartaric acid 20%	20	E	E	E	E	E	E
Methyl ethyl ketone (MEK)	20	E	G	-	-	-	-
Soda solution (saturated)	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Trichloroethane	20	E	E	E	E	E	E
	40	E	E	E	E	E	E
Trichloroethylene	20	E	F	G	-	-	-

Sulphuric acid 50%	20	EH	EH	EH	EH	EH	EH
	40	EH	EH	EH	EH	EH	EH
Sulphurous acid 5%	20	E	E	EH	EH	EH	FH
	40	E	EH	EH	EH	EH	FH

Note : E = Resistance to prolonged contact
F = Temporarily resistant
G = Breakdown of coating
H = Discoloration of coating
EH = Resistance to prolonged contact; Discoloration of coating
FH = Temporarily resistant; Discoloration of coating