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# FORMDEX APO1

## ACRYLIC POLYMER CEMENTITIOUS COATING

ASIA'S LEADING
BUILDING PROTECTION
SPECIALIST

bizSAFE 3

SOCOTEC
ISO 9001

SINGAPORE GREEN BUILDING PRODUCT
SGBC
LEADER

GreenLabel
SINGAPORE

# FORMDEX APO1

## ACRYLIC POLYMER CEMENTITIOUS COATING FOR HEAVY-DUTY FLOORING

FORMDEX APO1 IS A 2-COMPONENT PRE-PACKED HIGH PERFORMANCE ACRYLIC POLYMER MODIFIED CEMENTITIOUS MORTAR. IT IS IDEAL FOR SURFACES THAT REQUIRES HIGH ABRASION, IMPACT AND SKID RESISTANCE

Serial System (Ubi) - Singapore

## PRODUCT DESCRIPTION

Formdex APO1 is a two-component pre-packed high performance acrylic polymer modified cement based mortar designed for all typed of re-surfacing, patching and repairing of the concrete surface.

Part A is a polymer emulsion of the latest latex technology. Part B is a blend of special cement, specially graded filler, and chemical additives.

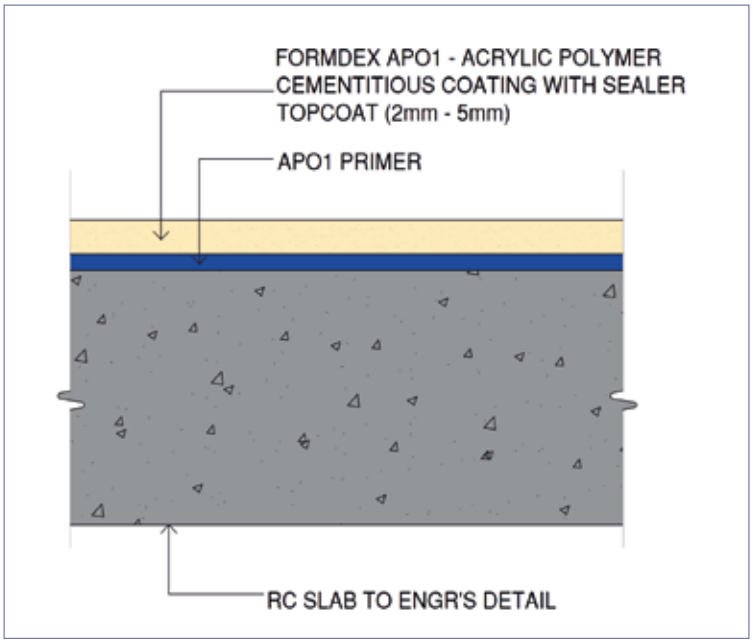
It is specially formulated as an abrasion, skid and water resistant topping, suited for both indoor or outdoor application.

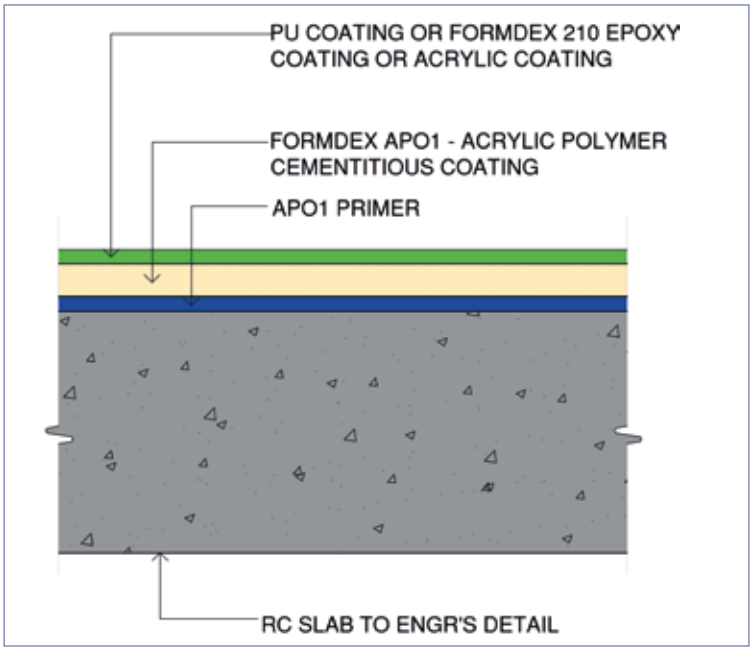
Formdex APO1 is suited for re-surfacing, patching, repairing of old, worn and damaged concrete surfaces.

It can be topcoated with Formrok 300 TFC (PU Coating) or Formrok 210 (epoxy coating - indoor) to give aesthetic appearance to the topping.

> "Part A is a polymer emuslion of latest latex technology.
>
> Part B is a blend of cement, specially graded fillers, and chemical additives."

# DIAGRAM OVERVIEW




## ADVANTAGES

- Suitable for interior and exterior applications.
- Excellent impact, abrasion and skid resistant.
- Water resistant barrier
- Excellent adhesion to new and old concrete.
- Easy to apply.

Hitchins since 1932

ASIA'S LEADING BUILDING PROTECTION SPECIALIST

# FORMDEX APO1

## Acrylic Polymer Cementitious Coating (APCC)

## DATA SPECIFICATION SHEET

SINGAPORE GREEN BUILDING PRODUCT SGBC LEADER

GreenLabel SINGAPORE

032 002
Environmentally Preferred Coating

## DESCRIPTION

Formdex APO1 is a two-component pre-packed high performance acrylic polymer modified cementitious mortar. It is ideal for surfaces that require high abrasion, impact and skid resistance.


## AREAS OF USAGE

- Repairs and resurfacing of old worn concrete floors, roads, bridges, runways, tarmac, etc.
- Patching and repairing of damaged concrete surfaces .
- Topping of new and existing concrete floors to increase the skid and wear resistance.
- Warehouses, car parks and driveways, bus bays, concrete roads, docks, etc.
- As a screed over to concrete roof gutters.
- As water, skid and wear resistance on carpark and ramps.
- Corridors and walkways for new and upgrading projects.
- Protective screed for industrial floors in high wearing areas to architects' specification.
- Repair and re-surfacing to damage concrete stairs.

## PRODUCT SPECIFICATION

PACKAGING: 5 Litres (Part A) 25 kg (Part B)

MIX RATIO: A : B = 1 : 5

SHELF LIFE: 12 months from date of manufacture if stored in unopened original packing in dry and cool envrionment

COMPRESSIVE STRENGTH (ASTM C109/C109M): ≥35 N/mm$^2$

FLEXURAL STRENGTH(ASTM C348): ≥ 8 N/mm$^2$

TENSILE STRENGTH (ASTM C307): ≥ 5 N/mm$^2$

UV ACCELERATED WEATHERING (ASTM G154):

a) 500 Hours: No cracking, softening or delamination after exposure

b) 1000 Hours: No cracking, softening or delamination after exposure

WATER ABSORPTION AFTER THERMAL AGING (ASTM C413): Absorption ≤ 10% (after 30 minutes water immersion)

FLOWABILITY (ASTM C939) : ≤ 150 SEC

TENSILE ADHESION BOND STRENGTH (BS EN 13892-8): ≥ 1.5 N/mm$^2$

POLYMER IDENTIFICATION (FTIR): Does not contain polyvinyl acetates (PVAs)

SKID RESISTANCE (ASTM E303): ≥ BPN 55 (wet condition) on wooden trowel

TABER ABRASION (H22 WHEEL) (ASTM D4060): ≤ 1.5g weigth loss / 1000 cycles

SHEAR BOND ADHESIVE (ASTM C482): ≥ 2.0 N/mm$^2$

WATER PENETRATION @ 0.4KGF/CM$^2$ FOR 6 HOURS (DIN 1048): ≤ 5mm

## SUBSTRATE PREPARATION

- Clean surfaces and remove any dust, oil, grease or contaminants.
- All smooth, old and deeply contaminated substrate must be abraded by mechanical means.
- Defective and unsound susbtrate has to be repaired prior to application of Formdex APO1.
- Existing substrate expansion joint is to be continued through the new topping and any movement joint should be isolated with a movement joint.

## APPLICATION

PRIMING

- Prime susbtrate with APO1 Primer using brush or roller at coverage pf approximately 8-10 $m^2$ per litre. (Surface texture can alter the coverage of any particular installation)
- Leave coated surface to dry for approximately 30-60 minutes prior to the application of Formdex APO1.

MIXING

- Pour Formdex APO1 Part A (Liquid - 5 litres) into a pail and slowly add Part B (Powder - 25kg)
- Mix ratio 1:5 (Liquid:Powder)
- Stir with a slow hand-held drill until a homogeneous lump free mixture is obtained
- Avoid entrapping air during mixing.

PLACING

- Immediately after mixing, apply the mixture with a steel trowel or squeegee to the primed surface.
- The consistency of the mixture allow application of 3mm - 5mm in one layer.
- For placement of more than 1 layer, each subsequent layer should only be placed after the previous layer has hardened for minimum of 24 hours.
- For anti-skid surface, broomig to desired textured may be done shorlty after initial set.

CURING

- Dry curing is essential to Formdex APO1.
- Where rapid drying condition exists such as high temperature, direct sunlight and strong wind, Formdex APO1 must be protected by a polyethylene sheet to reduce water loss.

FINISHING

- Formdex APO1 is manufactured from cement and other natural materials.
- Colour variations can occur although necessary controls are taken during manufacturing to minimise.
- Where aesthetics are important, it is recommended to coat Formdex APO1 with Formrok 300 TFC (PU Topcoat for coloured finished or Formdex 210 epoxy coating (for indoor).

PRECAUTION

- Do not apply Formdex APO1 at temperature below +10 °C and above +40 °C.
- Applied thickness is limited to 3mm - 5mm per layer.
- Do not use Formdex APO1 to repair moving cracks or existing concrete expansion joints.

## HEALTH & SAFETY

- Formdex APO1 is classified as non-hazardous.
- Avoid contact with skin and eyes.
- Flush with water when it comes in contact with skin and eyes.
- Refer to Product Safety Data Sheet.

Place Product Sample Here

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Revision A

# MAJOR PROJECTS

Luzerne Building- Singapore

Serial System (Ubi) - Singapore

Canteen - JTC Space at Tuas Ave 1

# APPLICATION & INSTALLATION

1. Concrete Surface to be roughen and key, creating an anti-skid surface texture

2. Vacuum off dust and debris

3. Application of AP01 Primer

4. Pour Formdex AP01 (Component A) into an empty pail

5. Pour in Formdex AP01 (Component B) gradually and mix with mechanical mixer

6. Use a steel trowel or rubber tool to evenly spread mixture over concrete surface

7. To achieve 1-5mm thickness for each layer. Cured for Minimum 7 Days Prior to Application of Sealer Topcoat

8. Application of Formrok Primer & Formrok 300 TFC Sealer Topcoat

9. Minimum 12 Hours of Curing Prior to Any Foot or Vehicular Traffic