

100% Solid Epoxy Mortar

DESCRIPTION

SMARTFLOOR EP 102 is solvent free (100% solid) epoxy mortar suitable for epoxy putty layer, epoxy mortar layer, epoxy screed mortar layer permanent repairs to spalling or damaged concrete. And repair where characteristics of high strength and excellent bonding are required.

USES

- Use as epoxy mortar layer.
- Use as epoxy putty layer.
- Use as floor leveling layer.
- Heavy duty floor.
- Epoxy screed mortar layer.
- Repairs to spalled concrete.
- General construction repair.
- Repairs to damaged precast units.
- Use as crack grouting material.

ADVANTAGES

- Excellent adhesion.
- Excellent chemical resistance.
- Easy to apply.
- High compressive, tensile and flexural strengths.
- Ultra strong.

TYPICAL PROPERTIES

Solids Content	100%
Pot Life @ 25 °C	30 - 45 minutes
Touch Dry @ 25 °C	4 hours
Hard Dry @ 25 °C	18 hours
Fully Cure @ 25 °C	7 days
Mixed Ratio	A : B = 2 : 1 by weight
Compressive Strength	1170 kgf/cm ² (ASTM C109)
Tensile strength	182kgf/cm ² (ASTMC307)
Flexural strength	757 kgf/cm ² (ASTM C580)
Bond strength by slant shear	25 kgf/cm ² (ASTM D882)
Bond strength	1.65 N/mm ² (Pull off Test)
Hardness, HRL	78.36 (ASTM D785)

SURFACE PREPARATIONS

The surfaces to be coated should be dry, clean, free from loose materials and other contaminations as well as free from oils and fats.

Priming: All surfaces treated with SMARTPRIME EP 112 or SMARTPRIME EP 135 should be primed with a solvent free low viscosity epoxy resin primer designed for maximum absorption and adhesion to the substrate.

New Concrete Floors: It spends at least 28 days old (at 35°C) for best removing laitance on new concrete floor by light grit blasting, mechanical scrubbing or grinding. Acid etching is not recommended.

Green and Damp Concrete Priming: Green and damp concrete must be primed with SMARTFLOOR EP 125MS.

Moisture Barrier: For green concrete, damp concrete apply SMARTFLOOR EPOGUARD (cementitious epoxy water base) before applying SMARTFLOOR EP 102

100% Solid Epoxy Mortar

2

MIXING

- Pouring all of Part B into Part A container.
- Mix by a low speed flat blade power mixer.
- Scrape bottom and sides of container to ensure Part B is thoroughly blended into all of Part A.
- For setting large format, add dry clean silica sand to thicken as desired about 2 minutes.

COVERAGE

- 1.35 - 1.50 kg./m² @1 mm.
- Actual coverage depends on substrate conditions as well as jobsite conditions.

APPLICATION

SMARTFLOOR EP 102 is applied from 0.2 mm. to 100 mm. thickness:

- The application of SMARTFLOOR EP 102 must be apply on the primed substrate.
- Spread the mixture into the surface.
- Apply balance and shape accordingly.
- Trowel onto fill to the desired thickness.
- Avoid air entrapment.

CLEANING

The working equipment, tools etc., can be mechanically cleaned by using brushes in combination with SMARTTHINNER No. 89. The cleaning should be done immediately after the completion of the work and within the pot life of the material to avoid sediments on the equipment, tools etc.

STORAGE & SHELF LIFE

When stored in dry, cool conditions, in the original unopened pack, SMARTFLOOR EP 102 will have a shelf life of 24 months.

PACKAGING

SMARTFLOOR EP 102 is supplied in the standard package: 30 kg./set

- Part A = 20 kg./set
- Part B = 10 kg./set

UV. Resistance, elastic material waterproof treatment for roof

3

DESCRIPTION

SMARTROOF AR is a high quality acrylic emulsion coating, elastic material on a polymer basis, designed as a decorative, flexible, elastomeric coating for sealing and waterproofing roofs, ready to use from the container, reinforced with fiberglass matting.

USES

- Designed as exposed waterproofing membrane and prevent water seepage to
 - External Walls
 - Metal roof & Gutters
 - Roof Tiles
 - Concrete Roof
- For old and new structures and Re-roofing
- As reflective heat resistant coating on compatible exposed roofing materials
- Suitable for both horizontal and vertical surfaces.

ADVANTAGES

- Ability to bridge cracks
- Water based, environmentally friendly.
- Remains flexible over wide range of substrates
- Excellent bonding to most building materials.
- Low labour costs due to easy, simple and quick application.
- UV resistance

TYPICAL PROPERTIES

Solid Content	70% by weight
Resin	Acrylic Polymer
Colour	Off-White, Lime Green, Sky Blue and Grey
Consistency	Paste - Like , Liquid
Touch Dry	Approx. 1 hour (@20°C, 50% relative humidity)
Temperature Resistance	Approx. -20°C to 100°C
Flash Point	Non-flammable (UL 94HB)
Chemical Resistance	Good
Tear Strength	9.76 kg/cm ² (ASTM D624)
Tensile strength	37.81kg/cm ² (ASTM D638)
Elongation	~300% (ASTM D638)
Hardness Shore A	70 (ASTM D2240)
Water Absorption	4.92% (ASTM C413)

SURFACE PREPARATION

All substrates shall be sound and free from dust, excess mortar, oil or other loose particles. Cracks or honeycombs shall be repaired using suitable non-shrink filler

COVERAGE

Apply 1m²/Kg. at 1mm. wet film thickness or 1m²/Kg. at 0.7mm. dry film thickness and leave the first layer coating for 2-4 hours before apply the second layer coating . Using for this coverage rate will provide 1.2 mm. thickness of dry film surface depending on substrate condition

UV. Resistance, elastic material waterproof treatment for roof

4

APPLICATION

- Can be applied using brush or roller.
- The first layer coating may be diluted slightly with water to ease the first application or primer substrate.
- The application shall be done 2 layers for minimum, the first layer is coated in one direction and the second one is coated perpendicular to the first one.
- Where fibre glass reinforcement is to be used, either overall or where necessary to bridge cracks or joints, after applying the first layer coating of SMARTROOF AR and allow let it tacky, place expedite fibre glass inside and leave it dry and follow by the second layer coating at a spread rate of 1m²/Kg. All fibre glass must be placed carefully and mole to all projections, allow joints to overlap and cover any up stands, gable ends, etc.
- Do not pour surplus materials down drains.

CLEANING

The cleaning with clean water should be done immediately after the completion of the work before the product sets.

STORAGE & SHELF LIFE

When stored in dry, cool conditions, in the original unopened pack, SMARTROOF AR will have a shelf life of 24 months.

PACKAGING

SMARTROOF AR is supplied in the standard package: 23 kg. Pail

A primer of polyurethane resin and special hardener

5

DESCRIPTION

SMARTROOF PU 201 is a primer coat consists of one component types of polyurethane resin and special hardener.

USES

- Suitable for steel material and bridge.
- Various construction surfaces such as concrete floor, rough and sandy floor, wood and fiber-glass, etc. It has the features of penetration, filling, closing and structure enhancement.
- Various building roofs, track, warehouse, etc.

ADVANTAGES

- Strong adhesion.
- Short drying time.
- Seamless and smooth surface.
- Waterproof, hardness and flexibility.
- Soft, comfortable, sound absorbent, heat resistance.
- Seamless, non-peeling, no cracking.
- Dust proof and easy to clean.

TYPICAL PROPERTIES

Solid Content	70% by weight
Resin	Polyurethane resin
Colour	Transparent liquid
Consistency	Liquid
Pot Life @ 25 °C	60 - 80 minutes
Touch Dry @ 25 °C	2 hours
Hard Dry @ 25 °C	4 - 6 hours
Fully Cure @ 25 °C	7 days
Aging Shrinkage	None
Shrinkage after Hardening	None
Bonding	Excellent

SURFACE PREPARATION

All substrates shall be sound and free from dust, excess mortar, oil or other loose particles. Cracks or honeycombs shall be repaired using suitable non-shrink filler

COVERAGE

- 0.2-0.3 kg/m² @ 95 microns thickness
- Actual coverage depends on substrate conditions as well as jobsite conditions.

APPLICATION

- Can be applied using a brush, roller or spray.

CLEANING

The cleaning with clean water should be done immediately after the completion of the work before the product sets.

STORAGE & SHELF LIFE

When stored in dry, cool conditions, in the original unopened pack, SMARTROOF PU 201 will have a shelf life of 12 months.

PACKAGING

SMARTROOF PU 201 is supplied in the standard package: 10 kg./set

A middle coat of polyurethane resin and special hardener

6

DESCRIPTION

SMARTROOF PU 202 is a middle coat consists of two component types of polyurethane resin and special hardener.

USES

- Waterproof on roofs: various building roofs such as office, residence factory, etc.
- Anti-leak interior and exterior wall waterproof construction for various building's basement and underground room.
- Bathroom, roof garden, water tower and swimming pool.
- Steel material for building and underground track.

ADVANTAGES

- Strong adhesion and easy to apply.
- Weather resistance and chemical resistance.
- Extend the aging of concrete cement and steel material.
- Contains chemical harmless and it is trouble-free for air pollution.
- High quality waterproof.
- Soft, comfortable, sound absorbent, heat resistance, non-slip and highly safe.
- Seamless, non-peeling, no cracking.
- Dust proof, water resistance, easy to clean.

TYPICAL PROPERTIES

Solid Content	100% by weight
Resin	Polyurethane resin
Mixing Ratio	2:1 by weight
Colour	Green , grey
Consistency	Liquid
Pot Life @ 25 °C	60 - 80 minutes
Hard Dry @ 25 °C	< 24 hours
Tensile strength	22 kg/cm ² (ASTM D638)
Elongation	390% (ASTM D638)
Tear Strength	4.40 kg/cm ² (ASTM D624)
Hardness Shore A	44 (ASTM D2240)
Flammability	No Flammable (UL 94)

SURFACE PREPARATION

All substrates shall be sound and free from dust, excess mortar, oil or other loose particles. Cracks or honeycombs shall be repaired using suitable non-shrink filler

COVERAGE

- 2.5-2.8 kg/m² @ 95 microns thickness
- Actual coverage depends on substrate conditions as well as jobsite conditions.

APPLICATION

- Can be applied using a trowel, brush and roller.

A middle coat of polyurethane resin and special hardener

7

CLEANING

The cleaning with clean water should be done immediately after the completion of the work before the product sets.

STORAGE & SHELF LIFE

When stored in dry, cool conditions, in the original unopened pack, SMARTROOF PU 202 will have a shelf life of 12 months.

PACKAGING

SMARTROOF PU 202 is supplied in the standard package: 30 kg./set

- Part A = 20 kg./set
- Part B = 10 kg./set

UV. Resistance polyurethane topcoat

DESCRIPTION

SMARTROOF PU 203 is a topcoat consists of two component types of polyurethane resin and special hardener.

USES

- Suitable for steel material and bridge prevention.
- Various construction surfaces such as concrete floor, rough and sandy floor, wood and fiber-glass, etc. It has the features of penetration, filling, closing and structure enhancement.
- Various building roofs, track, warehouse, etc.

ADVANTAGES

- Excellent adaptation to weather effects.
- Abrasion resistance and excellent compressive strength.
- Waterproof and acid-alkali resistance.
- Excellent adhesion.
- UV. resistance.
- Soft, comfortable, sound absorbent, heat resistance, non-slip and highly safe.
- Seamless, non-peeling, no cracking.
- Dust proof, water resistance, easy to clean.

TYPICAL PROPERTIES

Solid Content	55 - 60%
Resin	Polyurethane resin
Mixing Ratio	1:1 by weight
Colour	Green, grey
Consistency	Liquid
Pot Life @ 25 °C	60 - 80 minutes
Hard Dry @ 25 °C	4-6 hours
Fully Cure @ 25 °C	7 days
Shrinkage after Hardening	None
Chemical Resistance	Good
UV. Resistance	Excellent

SURFACE PREPARATION

All substrates shall be sound and free from dust, excess mortar, oil or other loose particles. Cracks or honeycombs shall be repaired using suitable non-shrink filler

COVERAGE

- 0.25-0.35 kg/m² @ 0.6 mm. thickness
- Actual coverage depends on substrate conditions as well as jobsite conditions.

APPLICATION

- Applying method by brush, roller or spray.

UV. Resistance polyurethane topcoat

CLEANING

The cleaning with clean water should be done immediately after the completion of the work before the product sets.

STORAGE & SHELF LIFE

When stored in dry, cool conditions, in the original unopened pack, SMARTROOF PU 203 will have a shelf life of 12 months.

PACKAGING

SMARTROOF PU 203 is supplied in the standard package: 20 kg./set

- Part A = 10 kg./set
- Part B = 10 kg./set