

## ARACO FLEXIBLE 120 PLUS (Formerly know as ARACO FLEXIBLE WP+)

High Elastomeric, Acrylic Polymer modified, Cementitious Waterproof Coating for Masonry and Concrete Structures

### Product Description

ARACO FLEXIBLE 120 PLUS is a made of two components with advanced technology formulated cement- based waterproof mortar added to enhance water-resistant liquid.

ARACO FLEXIBLE 120 PLUS gives elastomeric flexible membrane with crack bridging capacity > 2mm. It is an acrylic polymer modified, hardwearing, seamless and waterproof coating for concrete, masonry and most other construction materials. It provides an effective barrier to waterborne salts and atmospheric gases to prevent carbonation.

Meets the requirements for ASTM D 4541; D 870.

### Applications

ARACO FLEXIBLE 120 PLUS is used to internally and externally waterproof against positive and negative water pressure suitable for the following applications:

- Excellent protection coating to new concrete structures or repaired structures.
- Water retaining structures such as water tanks, swimming pools, potable water tanks, waste water treatment plants and sea water channels.
- Water retaining structures which may be subjected to movement.
- Water excluding structures such as basements, tunnels, sea defense walls
- Foundations and retaining walls.
- Wet areas such as showers, bathrooms, toilets, kitchens, balconies and roofs.
- As a protection coat for reinforced concrete elements against carbonation and chloride attack.



**Package:** 30 kg double pack (20 kg powder + 10 kg liquid)

### Product Advantages

- Non-toxic. Suitable for use in contact with potable water.
- Elastomeric and remain flexible when submerged in water.
- High performance: a 2 mm thick film can tolerate cracks up to 3 mm wide.
- Excellent Elongation at failure > 120%
- Waterproof - Resist up to 3 Bar.
- Breathable - whilst repelling water, allows substrate to breathe.
- Resistant to UV
- Brush, roller, trowel or spray applied.
- High resistance to carbon dioxide and chloride ion diffusion
- Excellent adhesion – bonds to porous and nonporous surfaces
- Compatible with adhesives used for fixing ceramic, mosaic and natural stone coverings.
- Resist occasional foot traffic.

## Surface Preparation

- The surface to be coated must be clean, sound, dust free and un-contaminated.
- Remove Loose parts, form release agents, Cement laitance and paint.
- Mechanically cleaned, use suitable cleaning method including high pressure water jetting, grit blasting and grinding.
- It should be sufficiently cured so that any shrinkage has already occurred.
- Wall to floor intersection should be cut 20X20 mm along the junction. It should be filled with sand/cement mortar modified with ARACO BOND and rounded out to 40 mm minimum radius.
- Concrete Surfaces should be leveled and as flat as possible.
- Cracks, blowholes and construction joints should be opened longwise in a V shape to a depth of about 3 cm and filled with **ARACO FLEXIBLE 120 PLUS** in trowelable consistency.
- Defected concrete should be filled with suitable repair mortar.
- It is important to stop water ingress prior to the application of **ARACO FLEXIBLE 120 PLUS**.
- Wash the substrates with clean water and remove any excess water at the time of application to achieve SSD Condition.

## Mixing Ratio

Slurry 2: 1 (Powder: Liquid) by weight

## Mixing

- **ARACO FLEXIBLE 120 PLUS** is supplied in premeasured units.
- **ARACO FLEXIBLE 120 PLUS** slurry can be obtained by mixing a 20 kg bag of **ARACO FLEXIBLE 120 PLUS** powder with 10 liters of **ARACO FLEXIBLE 120 PLUS** liquid.
- Add the liquid component into clean container, and then add the powder component slowly while mixing.
- Keep stirring until a perfectly homogenous
- Mix using slow speed drill fitted with suitable mixing paddle.
- Mix for 3-5 minutes until a homogeneous consistency is achieved.
- Leave the mixture for 3 minutes. Then re-mix for 2 minutes. Do not over mix.
- Mix material that can be applied within one hour (pot life).

## Product Application

### First coat

- Apply **ARACO FLEXIBLE 120 PLUS** with a brush, trowel or spray.
- Saturate concrete surfaces with clean water. Ensure that the substrate to be treated is damp but not wet at the time of application.
- Apply the first coat of **ARACO FLEXIBLE 120 PLUS** uniformly at application rate of 0.75 - 1 kg/m<sup>2</sup>.
- Do not spread the material too thin.
- Brush it well into the surface and finish it in one direction for neat appearance.

### Reinforcing with ARACO FIBER MESH

- For cracks and construction joints, it must be reinforced with alkaline resistant fiber glass mesh **ARACO FIBER MESH**
- **ARACO FIBER MESH** should be 80 gm/m<sup>2</sup> and the mesh opens should be 2\*2 mm.
- The mesh should be embedded into the thin layer (First coat) while it is still wet. Ensure that the mesh is fully adhered to the substrate.

### Second coat.

- Leave the first coat to dry for 4 - 6 hours minimum before applying the second coat.
- Low Temperatures and high humidity will delay setting.
- Apply the second coat exactly as mentioned above onto the first coat and finish it in one direction preferably at right angle to the previous coat.

## Curing

Never use curing compounds. In hot weather, provide suitable protection against weather conditions while setting. In cold, humid or unventilated areas, it may be necessary to leave the application for a longer curing period or to provide adequate ventilation.

## Finishing

- When surfaces are to be coated after treating with **ARACO FLEXIBLE 120 PLUS**, it should be left to cure for at least 7 days. Do not use solvent-based paints.
- When a sand / cement plaster finish is required on top of **ARACO FLEXIBLE 120 PLUS**, it is essential to apply a rough coat (spatter dash coat) of sand / cement mortar modified with **ARACO BOND** onto the final coat while it is still tacky.
- In areas where ceramic tiles will be installed on top of **ARACO FLEXIBLE 120 PLUS** such as wet areas, use **ARACO FLEX BOND** or **ARACO TILE FIX PLUS**.

## Recommendations

- Do not use **ARACO FLEXIBLE 120 PLUS** on plasters, painted walls and plywood.
- Avoid application in direct sun and/or strong wind.
- Do not mix **ARACO FLEXIBLE 120 PLUS** with admixtures, cement or aggregates.
- Do not add water to **ARACO FLEXIBLE 120 PLUS** in any circumstances.
- When the material begins to drag, do not add any water, but dampen the surface again.
- Apply only to sound and prepared substrates.
- Do not exceed maximum layer thickness, the maximum application thickness is 2 mm/coat.
- Do not mix more material than can be used in one hour (pot life).
- When rain is anticipated within 24 hours after application, the surface should be protected.
- For underground structures, backfilling can be carried out 3 days after completion of the **ARACO FLEXIBLE 120 PLUS** treatment.
- Filling water retaining structures with water can take place usually not less than 14 days after application. If earlier filling is required, filling may be considered after not less than 7 days ensuring that the surface is thoroughly checked for hardness.

## Consumption

0.75 - 1 kg/m<sup>2</sup>/coat. (Recommended 2 coats)  
Additional 0.8 - 1.0 kg/m<sup>2</sup> may be required where reinforcing mesh is used. Depending on the condition of the surface and method of application.

### Note:

**Coverage rate takes no account of wastage and may vary according to the type of surface involved.**

## Technical Data

Density of the mix	1.67 Kg/m <sup>3</sup>	
Toxicity	Non toxic	
Resistance to water pressure	5 bar (+ve pressure) 1 bar (-ve pressure)	
Substrate Temperature	+5°C minimum / +40°C maximum	
Tensile Strength	>1.5 N / mm <sup>2</sup>	EN - 14891
Compressive Strength	35 - 40 N/mm <sup>2</sup>	ASTM D 695
Bond Strength	> 1.5 N/mm <sup>2</sup>	ASTM C 882
Flexural Strength	10 - 12 N/mm <sup>2</sup>	EN 196-1
Alkaline resistance	Pass	
Resistance to UV	Pass	
Elongation	>140 % (At Failure) ASTM D 412	
Crack Bridging (At Failure)	3 mm	
Time between coats	6 hours minimum @ 20°C	

## Product Data

**Composition**     **ARACO FLEXIBLE 120 PLUS** powder is blend of specially selected cements, silica sand and reactive fillers.

**ARACO FLEXIBLE 120 PLUS** liquid is component of blended acrylic copolymers and wetting agents.

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**Appearance**     Grey or White

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**Storage condition**     Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates, the product must be stored in an air-conditioned environment.

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**Shelf Life**     12 months minimum from production date if stored properly in original an opened packaging

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## Legal Notes

The information, recommendations, and application are based on ARACO current knowledge and experience of the products when properly stored, handled, and applied under normal conditions. ARACO products are guaranteed against defective materials and manufacture and sold subject to standard conditions. Users should always refer to the most recent technical data sheet for the product concerned, copies of which will be supplied on request.

## Safety Instructions

The product may cause skin irritation. Wear gloves and goggles and apply barrier cream to your hands. In contact with eyes or mucous membrane. flush immediately with plenty of warm water and seek medical attention without delay.

## More from ARACO

A wide range of construction chemical products is manufactured by ARACO which include:

- Premixed mortar
- Tile adhesives & Grout
- Concrete Repair
- Flooring systems
- Protective Coating
- Waterproofing
- Bonding Agents
- Concrete Admixtures
- Surface Treatments
- Grout & Anchors
- Sealants
- Sports Flooring