



Arina Polymer

شرکت آرینا پلیمر

تولید کننده انواع اپوکسی های ساختمانی

Arina-adhesive SEA 221

Structural epoxy adhesive for adhering FRP strips and laminates

Introduction:

Arina-adhesive SEA 221 is two-component, high strength, solvent free, non-slumping epoxy adhesive, used for installation of strips and laminates on horizontal and vertical surfaces in FRP applications, as well as steel or composite bar anchoring.

Where to use:

Arina-adhesive SEA 221 is general purpose thixotropic adhesive which does not shrink while curing and provides excellent bonding to many construction materials. It is fast curing material to give high mechanical properties and excellent chemical resistance, which makes it ideal for a variety of applications. The product can be used in the following applications:

- Bonding of composite strips and laminates to concrete, steel, wood, stone or any other masonry materials.
- Structural bonding of steel plates to concrete, wood and other masonry materials.
- Repairing concrete surface defects and honeycombs.
- Dowel bars anchoring.
- As a gap filling adhesive.
- As leveling and bedding layer on surfaces to be received external strengthening.

Technical information:

Appearance	Grey paste(mixed) Comp. "A": White Comp. "B" : Black
Mixing ratio	A : B = 3 : 1 by weight or volume
Specific gravity (at 25 °C)	1.6 kg/l (mixed)
Bonding strength	2.5 MPa (Concrete failed)
Compressive strength	70 MPa (7 days)
Flexural strength	30 MPa
Full cure	After 7 days (at 25 °C)
Working Time / Pot life	60 min. (25 °C)

Properties:

- Excellent adhesion to concrete and most construction materials.
- Excellent early and final mechanical strengths.
- Excellent chemical resistance.
- Impact and shock resistance.
- Color coded components to ensure proper mixing control.
- Good wetting properties, no primer or bonding agent is needed on dry substrate.
- Easy to apply.
- Low odor.
- Non-sagging and non-slumping material.
- Does not shrink while curing.
- Can be extended with quartz sand as a repair mortar.
- Will not corrode reinforcement.
- Suitable for use in vertical and overhead applications.



Surface preparation:

The substrate must be sound and free of loose particles. Remove dust, laitance, oil, grease, curing compounds, waxes, disintegrated and other bond inhibiting materials from the surface. Surface can be prepared by blasting methods, grinding, or chipping. Substrate should be dried before application. For wet surfaces use **Arina-primer LEP 231** as primer.

Honeycombs and gaps have to be repaired by **Arina-patch GSP 245** as repair mortar.

Mixing:

Mix each component separately. Add component "B" to Component "A" and mix them thoroughly using a low speed drill (max. 400 rpm) fitted to the suitable paddle for at least for 3 minutes or until all striations have disappeared and a uniform color is obtained. For partial mixing, add 1 part of component "B" to 3 parts of component "A" by weight or volume and mix them thoroughly. Mix only required quantity which can be used within the pot life.

To produce an epoxy repair mortar, slowly add up to 1 part by loose volume of quartz sand (0.1~2.0 mm) to 1 part of mixed **Arina-adhesive SEA 221** and mix until uniform consistency be achieved.

Application method:

Thoroughly mixed **Arina-adhesive SEA 221** should be applied in a thickness of minimum 2 mm on substrate using a trowel, spatula, or knife. Also apply the mixed paste on laminate or plate with a dented spatula to a uniform thickness of 1.5 mm. Place the laminate or plate over the surface within given open time. Press the laminate or plate into the paste by mean of a rubber roller until extra pastes force out from both sides and maximum 3.0 mm thickness of uniform paste remains in place. Excess materials have to be removed.

External strengthening should not be done during first 24 hours. The epoxy paste will reach designed strengths after 7 days.

Material consumption:

Arina-adhesive SEA 221: Approximately 1.6 kg/m² for 1 mm layer thickness.

Arina-primer LEP 231(if required): 250 to 400 gr/m², depending on surface.

Limitations:

Minimum layer thickness: 0.5 mm

Maximum layer thickness 5.0 mm

Do not apply **Arina-adhesive SEA 221** at temperatures less than +5 °C.

Do not thin **Arina-adhesive SEA 221** by solvent. Solvent will prevent proper curing.

Age of concrete must be 21~28 days, depending upon curing and drying conditions.

Cleaning:

Tools and equipment should be clean after each application job or before break time. Uncured material can be washed with approved solvent. Cured material can only be removed mechanically.

Storage / Shelf life:

Store the product out of direct sunlight on pallet, and protect from extreme heat and rain fall. The shelf life for originally unopened package is 12 months from date of production.

Packaging:

Arina-adhesive SEA 221 is available in 4.0 kg. Total unit.

Safety precautions:

Product may cause skin irritation. Use personal safety devices such as gloves and goggles. If contacted with eyes or mucous membrane, wash immediately with plenty of warm water and seek medical attention.