

# PADRAPAT PARS

## Products for Rehabilitation

### PADRA-Poxive VEP-415

Versatile structural epoxy paste adhesive  
(Formerly: Adhesive SEA-221)



#### DESCRIPTION

PADRA-Poxive VEP-415 is a 2-component, solvent free, non-sagging epoxy paste adhesive, used for structural application such as installation of strips and laminates in FRP applications.

#### WHERE TO USE

PADRA-Poxive VEP-415 is a general purpose paste 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 resistant and ideal for a variety of applications. PADRA-Poxive VEP-415 can be used in the followings:

- Bonding of composite strips and laminates to concrete, steel, masonry, wood, stone, etc.
- Structural bonding steel plates to concrete, masonry, wood, stone, etc.
- Multi-purpose, high strength, structural epoxy paste adhesive
- 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 reinforcement

#### ADVANTAGES

PADRA-Poxive VEP-415 has following advantages:

- Excellent adhesion to concrete and most construction materials
- Excellent early and final mechanical strengths
- Excellent chemical resistance
- Impact and shock resistance
- Colour coded components to ensure proper mixing control
- Good wetting properties, no need primer or bonding agent on dry substrate
- Easy to use
- Low odour
- Non sagging and no flow 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

<b>Colour</b>	Concrete grey (mixed) Comp. "A": Light gray Comp. "B" : Dark gray
<b>Mixing ratio</b>	A : B = 3.0 : 1.0 by weight or volume
<b>Density (at 25 °C)</b>	1.650 kg/l (mixed)
<b>Bonding strength</b>	> 3.5 MPa (Concrete failed)
<b>Compressive strength</b>	65 MPa (7 days)
<b>Flexural strength</b>	> 30 MPa
<b>Service temperature</b>	-35 to +65 °C
<b>Full cured</b>	After 7 days (at 25 °C)
<b>Working Time / Pot life</b>	60 min. (25 °C)



# PADRA-Poxive VEP-415

## HOW TO USE

<b>Surface preparation</b>	The substrate must be sound and free of loose particles. Remove dust, laitance, oil, grease, curing compounds, impregnations, waxes, foreign particles, disintegrated materials, and other bond inhibiting materials from the surface. Surface can be prepared by blasting methods, grinding, or chipping. Substrate must be dry, for wet surfaces use PADRA-Guard EPW-712 as primer. Honeycombs and gaps have to be repaired by PADRA-Patch series or epoxy mortar.
<b>Mixing</b>	Mix each component separately. Add component "B" to Component "A" and mix them thoroughly using a low speed drill (max. 400 rpm) and suitable paddle for at least 3 minutes or until all striations have disappeared and a uniform color is obtained. For partial mixing, proportion 1 part of component "B" to 3 parts of component "A" by weight or volume into a clean pail. Mix only that quantity which can be used within its pot life. To prepare 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 PADRA-Poxive VEP-415 and mix until uniform in consistency.
<b>Priming</b>	Dry surfaces require no primer or bonding agent. For wet surface with no standing water, use PADRA-Guard EPW-712.
<b>Application method</b>	Thoroughly mixed PADRA-Poxive VEP-415 should be applied in a thickness of minimum 1.5 mm on substrate using a trowel, spatula, or knife. Apply the mixed paste on to the laminate or plate with a "roof-shaped" spatula to a nominal thickness 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. The external reinforcement must not be disturbed for a minimum 24 hours. The epoxy paste will reach it's design strength after 5 days.  <b>Note:</b> For rebar installation, it would be recommended that diameter of hole be 4 to 6 mm greater than diameter of rebar with hole's depth not smaller than 12 times of rebar's diameter.
<b>Material consumption</b>	PADRA-Guard EPW-712 (if required): 250 to 400 g/m <sup>2</sup> , depending on surface. PADRA-Poxive VEP-415: Approximately 1.650 kg/ m <sup>2</sup> for 1 mm layer thickness.
<b>Application limits</b>	Minimum layer thickness: 0.5 mm Maximum layer thickness: 10.0 mm Do not apply PADRA-Poxive VEP-415 at temperatures below 5 °C. Do not thin PADRA-Poxive VEP-415 by solvent. Solvent will prevent proper cure. Minimum age of concrete must be 21~28 days, depending upon curing and drying conditions. Depth of hole for dowel anchoring: (12~15)*(rebar diameter)
<b>Cleaning</b>	Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

## Storage / Shelf life

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

## Packaging

PADRA-Poxive VEP-415 is available in 4 and 10 kg pails.



## PADRA-Poxive VEP-415

### **Safety precautions**

Product may cause skin irritation. Wear gloves and goggles. In contact with eyes or mucous membrane, flush immediately with plenty of warm water and seek medical attention without delay.

Uncured products should be prevented from entering local drainage system and water sources. Spillage must be collected using absorbent materials such as sawdust and sand. Dispose of in accordance with local regulations.

