BUILDING TRUST

TECHNICAL DATA SHEET

SikaBiresin®AP112

(FORMERLY P-11 TYPE II)

POLYESTER FRP BOND & FILL SYSTEM
THIXOTROPIC / FIBER FILLED

DESCRIPTION

The reinforcing strength of SikaBiresin®AP112 fibrous filler makes it very useful for increased bonding strength or for rebuilding broken or void areas in SMC, RIM and other thermoset composites. SikaBiresin®AP112 is a smooth thixotropic paste system which exhibits easy mixing and stable application qualities. This system has excellent adhesive qualities, can be readily machined, accepts all types of finishes with "no bleed out", and is considered having low moisture characteristics. SikaBiresin®AP112 has high impact strength, excellent heat and cold resistance and a very high degree of chemical resistance. It can be applied in varying degrees of thickness with minimal shrinkage and is can be used for deeper surface composite repairs before final surfacing with a fairing compound.
Typical bonding applications include: FRP composites to FRP, rebuilding broken areas, metal inserts to fiberglass, marine fabrication, metal to concrete, detail blocks to FRP, wood to wood bonding and metal to metal bonding.

Please note: Although the two colored versions (white and green) of this product are catalyzed with BPO cream hardener, their work life is different.

PROPERTIES

- Exceptional adhesion
- Quick setting
- Minimal shrinkage
- No bleed out
- Excellent finishing and machinability
- Accept virtually all types of finishes
- Low moisture absorption
- High impact strength

PHYSICAL PROPERTIES

Composition			POLYESTER SikaBiresin® AP112	BPO HARDENER SikaBiresin® BPO	MIXED
Mix ratio by weight Mix ratio by volume at 25 °C			100	2	
Aspect			Paste	Cream Paste	Paste
Color		NOTE - Mixed color can be varied with Cream BPO color (As a mixing aid/indicator and final color choice)	White Green	White Red Black	
Viscosity at 25 °C	(cPs)	BROOKFIELD LVT			Non-sag paste
Specific gravity at 25 °C	lbs./gal (g/cc)	ASTM D792			11.40 (1.38)
Pot Life at 25 °C (102 g) Green system – White system -	(minutes)	ASTM D2471			 4.0 – 6.0 8.0 – 10.0

MECHANICAL PROPERTIES at 23 °C (1)

Hardness (Shore D)	ASTM D-2240	83
Flexural Strength (psi)	ASTM D-790	4,360
Flexural Modulus (psi)	ASTM D-790	216,100
Tensile Strength (psi)	ASTM D-638	2,419
Tensile Modulus (psi)	ASTM D-638	398,000
Tensile Elongation (%)	ASTM D-638	1.3
Compressive Strength (psi)	ASTM D-695	3,505
Compressive Modulus (psi)	ASTM D-695	63,000
Heat Deflection Temperature @ 66 psi	ASTM D-648	130°F (55°C)
Heat Deflection Temperature @ 264 psi	ASTM D-648	120°F (49°C)
Coefficient of Thermal Expansion (TMA) (ppm/°F (°C)	ASTM D-696	29 (52)
Water absorption – 24 hr/R.T. soak (%)	ASTM D-570	1.2

(1) Average values obtained on standard specimens / Cured 7 days at 25°C

PROCESSING

PROCESSING CONDITIONS

- Thoroughly blend 100 parts resin with 2 parts hardener by weight for 1 to 1 ½ minutes in clean dry container or on a clean dry surface.
- Carefully scrape the surfaces while blending to ensure complete mixing and uniformity.

SURFACE PREPARATION and APPLICATION

- The area to be filled or repaired should be thoroughly cleaned, roughened, cleaned again and dried to allow for the best possible adhesion.
- The mixed AP122 should be buttered into the area, avoiding trapping air during application.
- After curing to a tack-free state, the material can be sanded and finished as needed.

MIXING INSTRUCTIONS

Stir contents of can thoroughly using a spatula or putty knife. Place the required amount of filler and cream hardener on a disposable clean surface. Set up time of mix at room temperature will be 5-10 minutes. After 15-30 minutes the filler may be filed or sanded to final finish.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :

- Ensure good ventilation.
- Wear gloves, glasses and protective clothes.

For further information, please consult the Safety Data Sheets.

STORAGE CONDITIONS

- Product shelf life of polyester resin is 12 months when stored in original unopened containers between 65 – 77°F (15 – 25°C). Any opened can must be tightly closed. Product shelf life of BPO hardener is 18 months when stored in original unopened containers between 65 – 77°F (15 – 25°C). Any opened can must be tightly closed.
- Polyester resin contains filler which has the potential to separate in time, please re-homogenize prior to use.

PACKAGING

Packaging information on request, please contact your local sales representative or find your local contact on www.sikaadvancedresins.us

LEGAL NOTICE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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