

TECHNICAL DATA SHEET

SikaBiresin® AP100

(FORMERLY PROSEAL EZ)

EPOXY COATING COMPOUND
COATING FOR ABOVE AND BELOW WATERLINE APPLICATIONS

DESCRIPTION

SikaBiresin® AP100 is a white epoxy coating system developed for use in the manufacture of composite and wooden boats. This two component resin system will fill in and seal surface fabric textures in FRP reinforced structures, leaving a porosity free sandable surface, replacing the conventional method of blending resin, hardener and thickening additives. Typically, one application applied with brush, roller or squeegee, is all that is required to fill in the texture or weave in cloth fabric. SikaBiresin® AP100 is resistant to water immersion, making it an ideal choice for sealing exterior and interior marine structures, above or below-the-waterline. SikaBiresin® AP100 is available with a simple 5R:1H parts-by-volume mix ratio with SikaBiresin® AP100 hardeners.

SikaBiresin® AP100 is available with two hardener options: SikaBiresin® AP100-1 fast 15 minute hardener and SikaBiresin® AP100-3 slow 60 minute hardener.

PROPERTIES

- Easier to sand resin formula
- Low cured density
- Epoxy system offers good chemical resistance
- 0% VOC's (Volatile organic compounds)
- Simple 5/1 parts by volume ratio AP100 resin with either AP100-1 or AP100-3 hardeners
- Fills weave in one application with no porosity
- Compatible with fiberglass and wood marine vessels
- Water resistant for above or below waterline applications
- Surface can be sanded in as little as 4 hours with the AP100-1 system

PHYSICAL PROPERTIES – AP100/AP100-1 (Formerly Proseal EZ 15)

Composition		RESIN SikaBiresin® AP100	HARDENER SikaBiresin® AP100-1	MIXED	
Mix ratio by weight		100	22	100/22	
Mix ratio by volume at 25 °C		100	20	100/20	
Aspect		Grain free liquid	Liquid	Grain free liquid	
Color		White	Amber	White	
Viscosity at 25 °C	(cPs)	BROOKFIELD LVT	21,000 – 43,000	150 - 200	7,000 – 10,000
Vertical sag (50 mil - .050")					Pass
Specific gravity at 25 °C	lbs./gal (g/cc)	ASTM D792	7.7 (.92)	8.3 (1.00)	7.8 (.94)
Pot Life at 25 °C (102 g)	(minutes)	ASTM D2471			15.0
Cure to sand time @ (25°C)	(hours)				4 - 6

MECHANICAL PROPERTIES at 23 °C ⁽¹⁾

Flexural strength	(psi)	ASTM D-790		8,269
Flexural modulus	(psi)	ASTM D-790		421,021
Tensile strength	(psi)	ASTM D-638		5,663
Tensile elongation	(%)	ASTM D-638		1.7
HDT @ 66 psi	°F (°C)	ASTM D-648		130 (54)

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

PHYSICAL PROPERTIES – AP100/AP100-3 (Formerly Proseal EZ 60)

Composition	RESIN		HARDENER	MIXED	
	SikaBiresin® AP100		SikaBiresin® AP100-3		
Mix ratio by weight	100		21	100/21	
Mix ratio by volume at 25 °C	100		20	100/20	
Aspect	Grain free liquid		Liquid	Grain free liquid	
Color	White		Amber	White	
Viscosity at 25 °C	(cPs)	BROOKFIELD LVT	21,000 – 43,000	150 - 200	7,000 – 10,000
Vertical sag (50 mil - .050")				Pass	
Specific gravity at 25 °C	lbs./gal (g/cc)	ASTM D792	7.7 (.92)	8.0 (.96)	7.75 (.93)
Pot Life at 25 °C (102 g)	(minutes)	ASTM D2471	61.0		
Cure to sand time @ (25°C)	(hours)	16 - 24			

MECHANICAL PROPERTIES at 23 °C ⁽¹⁾

Flexural strength	(psi)	ASTM D-790	7,686
Flexural modulus	(psi)	ASTM D-790	476,600
Tensile strength	(psi)	ASTM D-638	5,108
Tensile elongation	(%)	ASTM D-638	1.4
HDT @ 66 psi	°F (°C)	ASTM D-648	117 (47)

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

CHEMICAL RESISTANCE/96 HOURS IMMERSION (MASS +/-% WEIGHT CHANGE)

Formerly -	<u>SikaBiresin® AP100-1</u>	<u>SikaBiresin® AP100-3</u>
	ProSeal EZ 15	ProSeal EZ 60
Water	+0.36%	+0.38%
1M H2SO4	+1.45%	Destroyed
Toluene	+2.37%	+9.92%
Unleaded Gasoline	+0.03%	+0.10%
Diesel Gasoline.....	+0.09%	No Data
Diesel Gasoline (28 day immersion)	+0.12%	No Data
Diesel Gasoline (21 month immersion)	+0.36%	No Data
Kerosene	+0.09%	+0.04%
Jet-A Aviation Fuel	+0.16%	+0.08%
Methyl Ethyl Ketone	Destroyed	Destroyed
Acetone	Destroyed	Destroyed

CHEMICAL RESISTANCE/32 DAY IMMERSION (MASS +/-% WEIGHT CHANGE)

Unleaded Gasoline with 25% EthanolDestroyedDestroyed

PROCESSING

PROCESSING CONDITIONS – SURFACE PREPARATION AND APPLICATION

Note: Do not topcoat directly over AP100. Use surface primer products as recommended by topcoat manufacturer.

- The area to be filled or repaired should be thoroughly cleaned, roughened, cleaned again and allowed to dry prior to application to ensure the best possible adhesion.
- After curing to a tack-free state, the material can be sanded and finished as needed.

Sanding or further preparation of the AP100 system is only possible after it has been allowed to fully cure to material specifications. To achieve desired results, it is critical that all tools, mixing boards, containers, and all other material application accessories must be free from contamination. Proper mixing of AP100 must be followed. It is imperative that the AP100 is applied to the prepared surface immediately upon achieving a proper mix. AP100 Compound must not be applied beyond the recommended pot life.

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 resin and hardener is 2 years when stored in original unopened containers between 65 – 77°F (15 – 25°C). Any opened can must be tightly closed. Any opened can must be tightly closed.

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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