

## TECHNICAL DATA SHEET

# SikaBiresin® AP014

(FORMERLY P-14)

POLYESTER FILLER SYSTEM  
MACHINABLE / RIGID

### DESCRIPTION

The most versatile of all set-fast filler pastes, AP014 ULTRA FILLER is a two component filler system which yields a smooth, creamy, thixotropic and workable paste with superior handling, set-fast characteristics and dimensional stability. Once applied it forms a rigid, strong surface which can be machined, sanded, filed or scraped to a feather edge. AP014 adheres and bonds to fiberglass, SMC, RIM, BMC, Graphite, Kevlar® and other types of composites as well as aluminum, steel, grey iron, copper, plaster, models, patterns and other substrates. AP014 offers the industry manufacturer a wide variety of applications for bonding, filling, sealing and finishing with optimum physical properties. AP014 ULTRA FILLER can be applied without pin-holing and exhibits no shrink or sink after curing. It accepts virtually all types of finishes e.g., lacquer, enamel, polyurethane, epoxy, etc., without any special surface preparation. It is a "no bleed out" system after finishing or if covered with a decorative film. Its high quality, coupled with the set-fast feature offers industry substantial savings in time and labor plus top quality in the finished product. AP014 can be used in areas of final fabrication, production, tooling, model & pattern making, repair operations and in many other applications. Typical applications include: filling composites surface porosity, honeycomb panel edge filler, bonding loose pieces and details, vacuum mold repair and modifications, urethane mold repairs and modifications, FRP composite repairs, pattern repairs and fillets, core box repairs and modifications, void and porosity filling, router fixture repairs, crack, dent and crevice repair, temporary holding fixtures, filling cloth impressions in pre-preg, non-conductive barrier potting, RIM/SMC/BMC surface filler, bonding inserts/hangers, urethane part repair, potting stripped threads, renewing worn surfaces and many others.

### PROPERTIES

- Very quick setting
- Comes in white and gray colors
- Dimensionally stable
- Excellent finishing and machinability
- Easy to use
- Good adhesion

## PHYSICAL PROPERTIES

Composition		POLYESTER SikaBiresin® AP 014	BPO HARDENER BPO	MIXED
Mix ratio by weight		100	2	
Mix ratio by volume at 25 °C				
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 Gray	White Red Black	
Viscosity at 25 °C	(cPs)	BROOKFIELD LVT		Paste
Specific gravity at 25 °C	lbs./gal (g/cc)	ASTM D792	13.4 (1.61)	10.0 (1.20)
Pot Life at 25 °C (102 g)	(minutes)	ASTM D2471		4.0 – 6.0

## MECHANICAL PROPERTIES at 23 °C <sup>(1)</sup>

Hardness (Shore D)		ASTM D-2240		86
Water absorption – 24 hr/R.T. soak (%)		ASTM D-570		0.16
Adhesive pull strength (psi)		ASTM D-4541		
Aluminum				2,940
Polyester filler				1,717
Mahogany				1,459
Epoxy glass laminate				753

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

## CHEMICAL RESISTANCE GUIDE

AP014 Ultra Filler combines saturated and unsaturated Polyester resins of medium to high reactivity. As an aid to the user, chemical resistance evaluations were conducted using a modification of ASTM 0543-60T.

## TESTING PROCEDURE

Samples nominally sized at 1/2" x 1" x 4" were immersed halfway in 4 ounces of reagent and stored for 12 months at ambient temperature. Reagents were swirled monthly, and specimens were rated every 4 weeks.

## RATING RESULTS

### Excellent, No Visible Attack

Benzene  
Gasoline  
Methanol  
Mineral Spirits  
Water (Distilled)

### Good, Very Slight Attack

Acetic Acid (5%)  
Citric Acid  
Hydrochloric Acid (10%)  
Nitric Acid (10%)  
Sodium Hydroxide (5%)  
Sulfuric Acid (10%)

### Not Recommended

Acetone

## PROCESSING

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### 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 AP014 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. Mix 100 parts paste to 2 parts BPO cream hardener by weight; i.e. approximately size of golf ball (paste) to a two inch strip of BPO catalyst. Set up time of mix at room temperature will be 5-10 minutes. After 15-20 minutes the filler may be filed or sanded to final finish.

## HANDLING PRECAUTIONS

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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

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- 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

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Packaging information on request, please contact your local sales representative or find your local contact on [www.sikaadvancedresins.us](http://www.sikaadvancedresins.us)

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## LEGAL NOTICE

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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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