PRODUCT BULLETIN

January 2021

STYPOL® APV Series

Polyvinyl Acetate Low Profile Additives

DESCRIPTION

Stypol® APV polyvinyl acetate low profile additives are designed for use in a variety of FRP fabrication processes and end use applications. Processes include press molding of bulk molding compound (BMC), sheet molding compound (SMC), or wet molding pastes and pultrusion.

APV polyvinyl acetate low profile additives are recommended for use in applications requiring excellent profile and good mechanical properties.

BENEFITS & FEATURES

- Low profile or Class "A" automotive appearance
- Excellent shrinkage control
- High gloss
- Good mechanical properties
- Compatible with unsaturated polyester molding resins
- APVU4000 is acid-modified for thickening in compounding applications

PROPERTIES – LIQUID

Values for Viscosity and Solids Content Classifications (1)				
Viscosity Grade	**Units**	**D**	**J**	**U**
Solids Grade	-	40	40	40
NVM(2)	%	40	40	40
Viscosity	cps	900	1,800	5,000
Acid Value	-	N/A	N/A	N/A
Water Content (Max.)	%	0.15	0.15	0.15

1) All properties at 25°C/77°F unless otherwise noted
2) Nonvolatile matter test method is FCTM 300.8
3) Viscosity test method is FCTM 400 (Brookfield Viscometer LVF Spindle #3 at 30 RPM)
4) Viscosity test method is FCTM 400 (Brookfield Viscometer LVF Spindle #3 at 12 RPM)
5) Acid value test method is FCTM 100
6) Water content test method is FCTM 103.5

APPLICATION

The following application data show use of APV Series additives in BMC. An example formulation is shown. Linear shrinkage data measured on molded parts is also shown. Linear shrinkage data measured on molded parts is also shown.

Low Profile BMC Formula (1)			
Component	**Description**	**Parts**	**Weight (%)**
MSC-K-06	Low Profile Molding Resin	80.00	17.19
APV-U-40	Low Profile Additive	20.00	4.30
BYK®-W 996 (2)	Viscosity Reducer	1.50	0.32
Parabenzoquinone (pBQ)	Cure Inhibitor	0.02	0.004
Luperox® P (3)	t-Butyl Perbenzoate Catalyst	1.00	0.21
Zinc Stearate	Internal Mold Release	6.50	1.40
Sachtolith® HD-S (4)	Zinc Sulfide Pigment	6.50	1.40
Camel Wite® (5)	Calcium Carbonate Filler	300.0	64.47
Vetrotex 919-A4 (6)	¼" Chopped Fiberglass Roving	49.80	10.70

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) BYK®-W 996 is a product of BYK Chemie
3) Luperox® P is a product of Arkema
4) Sachtolith® HD-S is a product of Sachtleben Chemie
5) Camel Wite® is a product of IMERYS
6) Vetrotex 919-A4 is a product of Vetrotex America

The following data represent typical values for the formula listed above. These values were obtained from panels molded at 300°F and 960 psi for two minutes. Panel thickness was approximately 0.125 in. Actual customer results may vary.

Molded Panel Data			
Data Type	**Test Description**	**Value**	**Test Method**
Shrinkage	Linear Shrinkage	1.0 mils/inch	FCTM 3010

Refer to Polynt's Composites Applications Guide ("Cookbook") for equipment and application recommendations. Each user must determine the suitability of this product to his/her particular mode of operation and intended end-use application. A Polynt representative will be available to assist in the proper selection of all Polynt-Reichhold products available for commercial use.

SHELF LIFE & STORAGE

The shelf life of Stypol® APV Series is 180 days from the date of manufacture from Polynt. To maximize usage life and maintain optimum properties, resins and gel coats should be stored in the original closed container at temperatures below 23°C/73°F and away from ignition sources and sunlight. Keep containers sealed to prevent moisture pick-up and monomer loss.

SAFETY & WARRANTY

To receive a copy of our safety and warranty information, please email safetyandwarranty@polynt.com.