PRODUCT BULLETIN

June 2024

ArmorFlex® 99F

99F Series High Flex Gel Coats

DESCRIPTION

ArmorFlex® 99F gel coats are formulated for use in the fabrication of fiber glass reinforced plastic parts. ArmorFlex® 99F products are ideally suited for use in marine and other high-performance applications.

BENEFITS & FEATURES

- Exceptional fracture resistance due to use of high elongation, advanced polymer base
- Good UV resistance for reduced chalking and yellowing in outdoor applications
- Good resistance to water and osmotic blistering
- Excellent spray-ability and leveling
- Low backside tack

ArmorFlex® 99F gel coats meet the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP). HAP 30 versions meet the NESHAP for Reinforced Plastics Composites Production. HAP 33 versions meet the NESHAP for Boat Manufacturing.

ArmorFlex® 99F gel coats offer good water (osmotic) blister resistance. These gel coats when applied properly and backed with IMEDGE® High Performance Barrier Coat (HPB), ARMORGUARD® vinyl ester barrier coat products, or ArmorStar® or HYDREX® vinyl ester skin resins, can make a durable, osmotic, blister-resistant composite that is suitable for applications with extended water exposure.

This coating system requires only the addition of methyl ethyl ketone peroxide (MEKP) to cure.

ArmorFlex® 99F gel coats are available in white and off-white colors. ArmorFlex® 99F gel coats are available in sprayable and brushable versions.

PROPERTIES – LIQUID

Test[1]	Unit	ArmorFlex® 99F Series		
		Sprayable Products		Brushable Products
		HAP 30 Versions	HAP 33 Versions	
Flash Point	°C/°F	26/79	26/79	26/79
Weight per Gallon	lbs/gal	11.36	11.18	11.29
Viscosity[2]	cps	16,000	16,000	29,500
Thix Index	-	5.75	5.75	5.75
Gel Time[3]	minutes	17.0	17.0	17.0
Sag Resistance	mils	Good at 20	Good at 20	Good at 20
Hide	mils	Typically complete at 8	Typically complete at 8	Typically complete at 8
Tack Free/Dull Gloss Time	minutes	60	60	60

1) Standard properties for ArmorFlex® 99F gel coats are shown. Custom properties may be available upon request
2) Brookfield RVF Spindle #4 at 4 RPM
3) 1.8% Arkema Luperox® DDM-9

APPLICATION

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 products available for commercial use.

SHELF LIFE & STORAGE

The shelf life of standard cure 99F Series ArmorFlex® gel coats is 90 days from the date of manufacture from Polynt. The shelf life of fast cure (gel time less than 9.0 minutes) ArmorFlex® 99F is 60 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.

RELATED PRODUCTS

Polynt recommends the use of PATCHAID® when patching ArmorFlex® 99F gel coats. Options are as follows:

- Polynt's PATCHAID® 970XJ037, 970X900, 970XJ166 and 970XA014 – Resin based products that can be mixed into the gel coat to improve the working properties of spray patches.
- FC PATCHAID® 970C961 Fast Cure Spraycure™– Monomer based product that can be mixed into the gel coat to improve the working properties of spray patches or can be used as an overspray to seal the open side of spray patches.
- PATCHAID® 970XD153 – Resin based aid developed for specifically for ArmorFlex® 99F to improve working properties of spray patches and specifically to reduce tack near the surface that may occur in non-ideal environmental conditions like low temperatures. Use of the PATCHAID® 970XD153 has demonstrated the ability to obtain tack free patch cure within 2 hours at 60°F. PATCHAID® 970XD153 requires special handling requirements.

Please review the Technical Datasheets for additional information on these products.

SAFETY & WARRANTY

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