PRODUCT BULLETIN

July 2020

ArmorPro® 99M Series

Multipurpose Gel Coats

DESCRIPTION

ArmorPro® 99M gel coats are isophthalic/NPG gel coats that have been formulated for the fiberglass industry. ArmorPro® 99M gel coats have lower volatile organic compounds (VOC's) than standard gel coats.

ArmorPro® 99M gel coats meet the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) for Boat Manufacturing. Certain specific white gel coat products may not meet the NESHAP standard for reinforced plastics. If in doubt, contact a Polynt representative for actual HAP content.

ArmorPro® 99M gel coats offer good water (osmotic) blister resistance. When applied properly and backed with one of Polynt's vinyl ester barrier coats or vinyl ester skin resins, these gel coats will provide durable osmotic water blister-resistant composites suitable for marine boat hulls.

This coating system is sag resistant and ready to spray, requiring only the addition of methyl ethyl ketone peroxide (MEKP) to cure.

The product code for base white (untinted) in the ArmorPro® series is 99MWK598. ArmorPro® is offered in custom tinted colors. It is recommended for light to medium dark colors. It is not recommended for extremely dark colors. Consult a Polynt representative about color selection.

BENEFITS & FEATURES

- Good UV resistance for reduced chalking and yellowing in outdoor applications
- Good resistance to water and osmotic blistering
- Good flexibility for cracking resistance
- Greater transfer efficiency and less overspray
- Low backside tack

PROPERTIES – LIQUID

Property (1)	Unit	99M Whites	99M Colors
Viscosity (2)	cps	4,250	4,300
Thixotropic Index (3)	-	6.25	6.0
Gel Time (4)	minutes	19	12

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer RVF Spindle #4 at 20 RPM
3) Brookfield Viscometer RVF Spindle #4 at 2/20 RPM
4) 1.8% Luperox® DDM-9

APPLICATION

ArmorPro® 99M gel coats must be mixed prior to use. This includes prior-to-production spray application and when obtaining material for patching or any material that has been set aside for patching. Several suitable types of mixing equipment and styles of agitators are available for both pails and drums. Regardless of the specific type used, the equipment must have sufficient horsepower (relative to container size) to achieve thorough circulation from top to bottom and out to the sides of the container. The agitator must be properly sized for the container and must allow for uniform mixing regardless of the liquid level in the container.

Do not overmix ArmorPro® gel coats. Overmixing can break down the polymer coating viscosity, increasing the tendency to sag. Overmixing can also result in styrene loss, which could contribute to porosity. Air bubbling should not be used for mixing. It is not effective and only serves as a potential source of water or oil contamination.

ArmorPro® 99M gel coats are formulated for spray application. Brushing or rolling is not recommended. To maximize the performance of these coatings, the spray equipment must be well maintained and regularly calibrated.

For optimum results, uniform catalyst mix must be achieved. Even with the equipment properly calibrated, potential problems can occur due to poorly atomized catalyst, surging problems (ArmorPro® or catalyst), poor tip alignment (catalyst to ArmorPro® mix), contamination, and poor application procedures, which will quickly negate all benefits of calibration. The equipment (and application procedures) must be monitored on a routine basis to ensure proper application and cure of the gel coat. Inquire about and adhere to all equipment manufacturers' recommendations.

For best adhesion between the gel coat and laminate, ArmorPro® gel coat should be laminated as soon as possible. This will also minimize the risk of pre-release. Excellent adhesion can typically be achieved if the laminate is applied within 8 hours of gel coat application.

CAUTION

ArmorPro® 99M products may not be compatible in the liquid state with other gel coats or resins. Spray and pumping equipment must be completely clean of gel coats or resins prior to use. Defects in the final gel coat film may occur if the cleaning step is not completed properly. Do not add any material other than recommended methyl ethyl ketone peroxide to these products without the advice of a representative of Polynt Composites USA.

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 standard cure ArmorPro® 99M is 120 days from the date of manufacture from Polynt. The shelf life of fast cure (gel time less than 9 minutes) ArmorPro® 99M 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 ArmorPro® 99M 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.

SAFETY & WARRANTY

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