PRODUCT BULLETIN

June 2020

# POLYCOR® 99C Series

## Casting Gel Coats

## DESCRIPTION

POLYCOR® gel coats are high performance products formulated for the Casting Industry. These gel coats have lower volatile organic compounds (VOC) than conventional gel coats.

POLYCOR® gel coats meet the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP): Reinforced Plastic Composites Production.

POLYCOR® 99C's gel coats were primarily developed for casting applications. These gel coats provide durable, reduced maintenance products.

## BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Ready to use with only proper amount of the appropriate MEKP
- Resistance to porosity
- Resistance to tearing, color separation, and sagging
- Good patch ability
- Resistant to water and certain chemicals
- Lower VOC's

## PROPERTIES – LIQUID

| Property (1) | Unit | 99C White | 99C Colors |
|---|---|---|---|
| Viscosity (2) | cps | 3,900 | 3,900 |
| Thixotropic Index | - | 6.0 | 6.0 |
| Gel Time (3) | minutes | 13 | 13 |
| Flash Point (Seta Closed Cup) | °C/°F | 31/88 | 31/88 |

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

## APPLICATION

Although POLYCOR® 99C gel coats are formulated as low VOC products, it should be noted that over-atomization of a gel coat means more volatilization (more overspray, more monomer and solids loss, more odor). It is important then to strive for good atomization (good fan pattern, no fingers or tails, uniform particle size of about 1/16″) while maintaining lowest pump and atomizing pressures as practical.

The inherent chemistry of these gel coats does not allow for the same ease of fluid movement experienced with other gel coats. Adjustments may have to be made for pump pressure, delivery rate, tip size and atomization. Polynt Composites does not recommend fluid lines longer than 50 feet, or pumps smaller than 20:1 ratio. In addition, 99C's are more sensitive to cold temperatures than are other gel coats. POLYCOR® 99C's are formulated for airless as well as conventional spray application. Neither brushing nor rolling is recommended. Refer to Polynt's Composites Applications Guide ("Cookbook," Conventional Gel Coat–Spray Equipment) for equipment recommendations. For best results these high performance coatings require careful application procedures. Poor application will quickly negate the beneficial properties of these gel coats. Refer to Polynt's Composites Applications Guide ("Cookbook," Conventional Gel Coat–Application). Polynt Composites recommends a gel coat delivery rate of no more than 2.5 pounds per minute with conventional air atomized equipment, and no more than 4 pounds per minute with airless equipment.

For best overall end performance properties, a wet film thickness of 18 ± 2 mils is recommended as ideal.

Films less than 12 mils may not cure properly, may be hard to patch, have more print-through, and be more susceptible to water blisters. Films above 24 mils may pre-release, trap porosity, crack and are more subject to weathering discoloration.

In addition to the low VOC chemistry, the lower viscosity and thixotropic index result in both less overspray and less monomer loss, but the total film thickness should be sprayed in multiple passes (at least 3 at 18 mils, 4 at 20 to 24 mils). More rapid film build could result in some sag.

Proper mold maintenance is important. Although 99C's have excellent patching properties, minimal repair work is always desirable. Sanding and compounding can hasten the chalking and loss of gloss of all gel coats. Avoid overspray settling on mold surfaces by beginning the spray pattern closest to the vapor/air exhaust and progressing to the opposite mold end. Maintain recommended spray distances from the mold surface.

POLYCOR® 99C gel coats are not compatible in the liquid state with isophthalic gel coats or resins. Spray and pumping equipment must be completely clean of these products before POLYCOR® 99C's can be used.

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

**CAUTION**

99C gel coats are not compatible in the liquid state with isophthalic gel coats or resins. Spray and pumping equipment must be completely clean of these products before 99C's can be used.

Do not add any material, other than recommended methyl ethyl ketone peroxide, to these products without the advice of a representative of Polynt Composites. Under no circumstances should glycerin be added.

## RELATED PRODUCTS

Polynt recommends the use of PATCHAID® when patching POLYCOR® 99C Series 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.