PRODUCT BULLETIN

March 2022

POLYCOR® 946 Series

Metallic Gel Coats

DESCRIPTION

POLYCOR® 946 Series metallic gel coats are used in passenger, camper, utility, and recreation vehicles of the transportation industry, as well as for decorative structural components. These products are not recommended for water immersion service.

Polynt's 946 Series metallic gel coats yield an appearance similar to automotive metallic finishes. Metallic gel coats are available in various colors in the 946 Series in a standard isophthalic base.

Unlike the Polynt's other gel coat series, POLYCOR® 946 Series product codes will not correspond to colors in the other series, that is, POLYCOR® 946-N-001 will not be the same color as POLYCOR® 944-N-001 or POLYCOR® 943-N-001, etc. A given gel coat color can be made in a variety of metallic effects, multiple POLYCOR® 946 products could be made to correspond to any one POLYCOR® 943, POLYCOR® 944, etc. developed color.

BENEFITS & FEATURES

- Unique visual effect
- Sparkling finish

PROPERTIES – LIQUID

Property[1]	Unit	946 Series
Viscosity[2]	cps	14,000
Thix Index	-	6.25
Gel Time[3]	minutes	14
Lay-up Time	minutes	62.5
Hide	-	Normally complete at 10 mils
Sag Resistance	-	Good at 20 mils
Weight per Gallon	lbs/gal	10
Flash Point	°C/°F	29/85

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

Hide will vary depending on the color and metallic effect desired. Some colors of gold, red and dark blue may be incomplete in hide at 20 mils wet and require a backup to impart hide. Ask a Polynt Composites representative about a specific formulation.

APPLICATION

Metallic gel coats are formulated for spray application. Brushing or rolling is not recommended. In order to maximize the performance of the coating, the spray equipment must be well-maintained and regularly calibrated. Poorly maintained equipment and substandard application negates the beneficial properties of the POLYCOR® 946 Series gel coats. The equipment and application procedures must be monitored on a routine basis in order to ensure proper application and cure of the gel coat. It is important to inquire and adhere to all equipment manufacturers' recommendations.

Flakes of aluminum, bronze, coated mica, copper, glass, iron oxide, and thermoplastic or thermoset plastic are used to impart metallic effects. Type, size, concentration, orientation, transparency and opacity of the flakes, along with the presence of dyes or pigments, contribute to the overall color and appearance of metallic gel coats.

Changes in the setup of the spraying equipment and/or application technique lead to different metallic color shades and patterns. To reproduce the metallic color, it is essential that the spray equipment settings, and spray distance is kept constant. Most products can be sprayed using standard tip sizes. However, some pigments may require the use of larger tip sizes to avoid plugging.

In order to achieve the best overall end performance properties, a wet film thickness of 16-20 mils is recommended. Note: Some colors may require additional film thicknesses for hide. Films above 30 mils may pre-release, trap porosity, crack and are more subject to weathering discoloration.

If the patterns of the metallic on the finished part are not satisfactory, a dust coat approach could be used. Whether it is a heavy dust or a light dust is not as important as the dust coat being consistent and uniform. A heavy dust will produce a different effect than a light dust. If the gel coat is sprayed to an extremely inconsistent dust coat, the different effects will be noticeable. Three to four minutes interval should be allowed before the final spray is applied to achieve the desired film thickness.

Patching metallic gel coats is very difficult and patches will likely be more noticeable than those for solid colors. Fabricators may have to be content with some color and appearance differences between the patch and surrounding area, due to the sanding/polishing disturbance of the metallic pigments.

Metallic gel coats expose similarly to conventional solid gel coat colors. Chalk development and gloss loss will vary with the metallic content. High metallic content gel coats may demonstrate more rapid chalk development than others. Ask a Polynt representative about specific formulations.

CAUTION

Metallic gel coats may contain aluminum pigments. Precautions of aluminum pigment-containing products must be exercised. Wearing gloves is recommended when working with these products.

Small spills and drops should be cleaned immediately before the concentrate contaminates and spreads in the working area. All equipment should be well grounded. Chlorinated solvents in contact with aluminum can cause an explosion; refrain from cleaning the metallic spray equipment with such solvents.

Metallic gel coats are not compatible in the liquid state with other gel coats or resins. Spray and pumping equipment must be completely clean of these gel coats or resins before metallics can be used.

Do not add any material, other than a recommended methyl ethyl ketone peroxide, to these products without the advice of a representative of Polynt.

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® 946 is 120 days from the date of manufacture from Polynt. The shelf life of fast cure (gel time less than 9.0 minutes) POLYCOR® 946 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

PATCHAID® 970XJ037
PATCHAID® 970X900

SAFETY & WARRANTY

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