

POLYCOR[®]

957BK241 and 957BJ136 Vinyl Ester Black *Tie Coat*

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Description

POLYCOR[®] 957BK241 and 957BJ136 are *tie coats* formulated to facilitate adhesion between unsaturated polyester POLYCOR[®] gel coats and fiberglass epoxy laminates.

A number of other benefits have been demonstrated, capitalizing on some of this product's unique properties.

Distinguishing Characteristics

- Low orange peel, which assures the best possible surface profile
- A tough and resilient resin system that can reduce potential cracking and crazing
- The black color provides a visual aid to see air bubbles during lamination
- Cosmetics are improved by reducing fiber print-through and distortion

Do not use 957BJ136 or 957BK241 as finish coats. Exterior durability is poor and will result in rapid chalking and fading.

Both POLYCOR[®] 957BK241 and 957BJ136 are thixotropic and accelerated, and require only the proper amount and type of methyl ethyl ketone peroxide catalyst to cure at room temperature. It should not be used at temperatures below 70°F.

Typical Liquid Properties (77⁰F, 25⁰C)

These values may or may not be manufacturing control criteria; they are listed for a reference guide only. Particular batches will not conform exactly to the numbers listed because storage conditions, temperature changes, age, testing equipment (type and procedure) can each have a significant effect on the test results. Gel coats with properties outside of these ranges can perform acceptably.



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Test	957BK241	957BJ136
Viscosity ⁽¹⁾	9,000	9,000
Thixotropic Index (2/20)	4.3	5.0
Flash Point	88 ⁰ F	88 ⁰ F
Hazardous Air Pollutants	See MSDS	See MSDS
Volatile Organic Compounds	43.3%	43.2%
Weight per Gallon	8.62 lbs	8.62 lbs
Gel Time	15.0 min. ⁽²⁾	11.5 min. ⁽³⁾
Lay-up Time	60 min. (max.)	53 min.
Sag Resistant	@ 20 mils wet	@ 20 mils wet
Hide (mils)	1 and 3	1 and 4
Color Match (units)	CMC max DE = 2.0	CMC max DE = 2.0

⁽¹⁾Brookfield RVF #4 spindle @ 4 rpm

⁽²⁾1.8% MEKP 925

⁽³⁾1.8% HP-90

Typical Physical Properties

Test	Value
Volumetric Shrinkage	8.5%
Linear Shrinkage	Approximately 2.0%
Elongation	3.3%

Refer to the MSDS for handling precautions. An MSDS will be supplied automatically with the first order for material, and is available by product code upon request from CCP's Regulatory Department, or on CCP's website at www.ccpcompositesus.com.

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Application

POLYCOR[®] 957BK241 or 957BJ136 must be mixed prior to use. 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.

Spraying is the preferred method of application: conventional or air atomized, air-assisted airless, or airless. Recommended delivery rate is no more than 2.5 pounds per minute with air-atomized equipment and no more than 3 pounds per minute with airless equipment. Brushing or rolling is not recommended.

Spray a film thickness of 18 ± 2 mils (a minimum of 16 mils) wet, behind a cured cosmetic gel coat. POLYCOR[®] 957BK241 or 957BJ136 vinyl ester *tie coat* will be ready to lay-up on in 45 to 60 minutes.

Application of POLYCOR[®] 957BK241 and 957BJ136 is different from gel coats. It has a "thin" feel to it and goes on rapidly with very little orange peel. For these reasons, it may give the false impression of sagging (visually it would appear to be on the verge of sagging, but it is not). A mil gauge should be used frequently to monitor and assure proper film thickness.

As with conventional gel coats, spray approximately 6 mils per pass, up to the desired thickness.

Batch mixing is recommended to achieve the best catalyst mix and cure because even with the equipment properly calibrated, potential problems can occur due to: poorly atomized catalyst; surging problems (POLYCOR[®] 957BK241, POLYCOR[®] 957BJ136 or catalyst) and poor tip alignment (catalyst) to *tie coat* mix; contamination; and poor application procedures which can quickly negate all benefits of calibration. The equipment and application procedures must be monitored on a routine basis to ensure proper application of the *tie coat*. Ask about and adhere to all equipment manufacturers' recommendations.

Cure

It is recommended that gel time be checked in the customer's plant because age, temperature, humidity and catalyst will produce varied gel times. All data referencing gel or cure refers specifically to Pergan HP-90 catalyst. Arkema Luperox[®] DHD-9, Norac NOROX MEKP-925 and NOROX MEKP-9H are expected to yield similar performance. Other MEKP peroxides such as: Akzo Nobel CADOX L-50a and CADOX D-50, NOROX MEKP-9, and ATOFINA Luperox[®] DDM-9 may also be used but gel times may vary.

Catalyst level should not exceed 2.5% or fall below 1.2% for proper cure. The recommended catalyst range

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for proper cure is 1.2% to 2.5%, with 1.8% at 77°F being ideal. Normally the gel coat film is ready to lay-up within 60 minutes. This time element is dependent on material temperature, room temperature, humidity, air movement, and catalyst concentration.

Best results are obtained when used at temperatures above 70°F. Cure properties below 70°F are questionable and can adversely affect the final properties.

Caution

Do not add any material, other than an appropriate methyl ethyl ketone peroxide, to this product without the advice of a CCP Composites representative.

Storage

Un-catalyzed, this product has a shelf life of 60 days from date of manufacture when stored at 73°F or below in a closed, factory-sealed, opaque container, and out of direct sunlight. The usage life is cut in half for every 20°F over 73°F.