



Technical Data Sheet

57 V SERIES GELCOAT (Barrier Coats)

DESCRIPTION:

Vinylester barrier coats 57V have been formulated as barrier coats to reduce osmotic blistering, and as a print blockers, to provide a smoother gelcoat finish. A number benefits have been demonstrated, capitalizing on some of these product' unique properties.

- Black color that provides a visual aid to see air bubbles during lamination
- White available for use behind low-hide colors
- Less osmotic(water) blistering
- Improved cosmetics due to reduced fiber print-through & distortion
- Reduced back side tack

Do not use vinylester barrier coats 57V as a finish coat, as exterior durability is poor, and will result in rapid chalking and fading.

TYPICAL PROPERTIES @ 25°C (77°F)

These values may or may not be manufacturing control criteria; they are listed for a reference guide only. Particular batches may 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. Gelcoats with properties outside of these ranges can perform acceptably.

Test	Value
Viscosity	
Brookfield RVF #4 Spindle @ 4 rpm	12000-15000 cps
Thixotropic Index	4 – 6
Gel time @ 1.8% MEKP NOROX 925H	15 -20 minutes
Lay-up time	60 minutes
Sag resistance	24 mils wet
Color match	black, grey, white

APPLICATION:

At rest, vinylester barrier coats 57V appear to be very thick in the container. It is important to mix the material (before each use) to break down this high viscosity. It is recommended that the temperature of the material be at least 75°F. In-line fluid heaters (be sure all safety rules are applied) can be used to raise the temperature of the material to room temperature. In addition, a larger angle tip is recommended to compensate for a small fan; use a .021 inch orifice with a 60° fan. The fluid hose should be at least ½ inch in diameter, but a four-foot length of 3/8 inch whip can be used at the gun. Preferred method of application is spray, either 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 20 to 24 mils wet, behind a cured cosmetic gel coat.



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Do not spray less than 16 mils wet. Less than 16 mils wet will not cure properly and can actually cause blisters worse than if there was no barrier coat at all.

As with conventional gel coats, spray approximately 5-6 mils per pass, up to the desired thickness. See MB-324 for additional specific application and equipment data.

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 (gel coat or catalyst); poor tip alignment (catalyst to gel coat 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. 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 NOROX MEKP925-H catalyst.

Catalyst level should not exceed 2.5% or fall below 1.2% for proper cure. The recommended catalyst range 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. This product should not be used when temperature conditions are below 65°F, as cure may be adversely affected.

CAUTION:

Vinylester gel coats are not compatible in the liquid state with ISO/NPG gel coats or ISO/NPG resins. Equipments must be completely clean of these gel coats or resins before isophthalic's can be used.

Do not over-mix gel coats. Over-mixing breaks down gel coat viscosity, increasing tendencies to sag, and causes styrene loss, which could contribute to porosity. Gel coats should be mixed once a day for 10 minutes. The gel coat should be mixing to the sides and bottom of the container with the least amount of turbulence possible. Air bubbling should not be used for mixing. It is not effective and only serves as a potential for water or oil contamination.

Do not add any other material, other than the recommended methyl ethyl ketone peroxide, to this product without the advice of a representative of Polynt Composites. See msds before using.

STORAGE LIMITATIONS:

Uncatalyzed, this product has a usage life of 45 days from date of shipment from Polynt Composites when stored at 73°F or below, in a closed, factory-sealed, opaque container, and out of direct sunlight.



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SHIPPING:

Standard shipments are made in open-head 20 or 204 litres steel drums. Closed head drums are available on request.

POLYESTER SAFETY INFORMATION

All sales of products manufactured by Polynt Composites, and described herein are made solely on condition that Polynt Composites's customers comply with applicable health and safety laws, regulations and orders relating to the handling of our products in the workplace. Before using, read the following information and both the product label and Material Safety Data Sheet pertaining to each product.

Most polyester products contain styrene. Styrene can cause eye, skin and respiratory tract irritation. Avoid contact with eyes, skin and clothing. Impermeable gloves, safety eyewear and protective clothing should be worn during use to avoid skin and eye contact. Wash thoroughly after use.

Styrene is a solvent and may be harmful if inhaled. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Extended exposure to styrene at concentrations above the recommended exposure limits may cause central nervous system depression causing dizziness, headaches or nausea and if overexposure is continued indefinitely, loss of consciousness, liver and kidney damage.

Do not ingest or breathe vapor, spray mists and dusts caused by applying, sanding, grinding and sawing polyester products. Wear an appropriate NIOSH/MSHA approved, properly fitted, respirator during application and use of these products until vapors, mists and dusts are exhausted, unless air monitoring demonstrates vapors, mists and dusts are below applicable exposure limits. Follow respirator manufacturer's directions for respirator use.

The International Agency for Research on Cancer (IARC) has reclassified styrene as Group 2B "possibly carcinogenic to humans." This new classification is not based on new health data relating to either humans or animals, but on a change in the IARC classification system. The Styrene Information and Research Center does not agree with the reclassification and has published the following statement: Recently published studies tracing 50,000 workers exposed to high occupational levels of styrene over a period of 45 years showed no association between styrene and cancer, no increase in cancer among styrene workers (as opposed to the average among all workers), and no increase in mortality related to styrene.

Styrene is classified by OSHA and the Department of Transportation as a flammable liquid. Flammable polyester products should be kept away from heat, sparks, and flame. Lighting and other electrical systems in the work place should be vapor-proof and protected from breakage.

Vapors from styrene may cause flash fire. Styrene vapors are heavier than air and may concentrate in the lower levels of molds and the work area. General clean air dilution or local exhaust ventilation should be provided in volume and pattern to keep vapors well below the lower explosion limit and all air contaminants (vapor, mists and dusts) below the current permissible exposure limits in the mixing, application, curing and repair areas.

If the label or Material Safety Data Sheet indicates lead or lead chromate is present, do not use on toys, furniture or surfaces that might be chewed by children. Wash hands thoroughly after using and before smoking or eating. Long-term overexposure by inhalation or ingestion of mists and dusts from products containing lead compounds and lead chromate can cause harmful effects to the urinary, blood, reproductive and nervous systems and may create risk of cancer. Use a respirator as explained in Paragraph 4 of this Information Sheet.



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Some polyester products may contain additional hazardous ingredients. To determine the hazardous ingredients present, their applicable exposure limits and other safety information, read the Material Safety Data Sheet for each product (identified by product number) before using. If unavailable, these can be obtained, free of charge, from your Polynt Composites representative.

Polyester products have at least two components that must be mixed before use. Any mixture of components will have hazards of all components. Before opening the packages, read all warning labels. Observe all precautions.

Keep polyester containers closed when not in use. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations. Emptied containers may retain hazardous residue. Do not cut, puncture or weld on or near these containers. Follow container label warnings until containers are thoroughly cleaned or destroyed.

FOR INDUSTRIAL USE AND PROFESSIONAL APPLICATION ONLY.

KEEP OUT OF REACH OF CHILDREN.



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DISCLAIMER AND LIMITATION of LIABILITY

The products sold hereunder shall meet Seller's applicable specifications at the time of shipment. Seller's specifications may be subject to change at any time without notice to Buyer. Buyer must give Seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the Product Code(s), description and date of purchase) within thirty (30) days of the date of shipment of the product or prior to the expiration of the shipment's quality life, whichever occurs first. THE WARRANTY DESCRIBED HEREIN SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

The Buyer's sole and exclusive remedy against Seller shall be for the replacement of the product or refund of the purchase price in the event that a defective condition of the product should be found to exist by Seller. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER.

The sole purpose of this exclusive remedy shall be to provide Buyer with replacement of the product or refund of the purchase price of the product if any defect in material or workmanship is found to exist. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Seller is willing and able to replace the defective products or refund the purchase price.

To the best of our knowledge, the information contained herein is accurate.

Final determination of the suitability of the material for the use contemplated, the manner of use and whether the suggested use infringes any patents is the sole responsibility of the buyer.