

POLYCOR® VINYL ESTER NEUTRAL BARRIER COAT 957XK100

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DESCRIPTION

Vinyl Ester 957XK100 has been formulated as a barrier coat to reduce osmotic blistering, and as a print blocker, to provide a smoother gel coat finish. A number of benefits have been demonstrated, capitalizing on some of this product's unique properties.

Among these are:

- Less osmotic (water) blistering,
- Final pigmented material will provide a visual aid to see air bubbles during lamination,
- Improved cosmetics due to reduced fiber print-through and distortion.

Do not use 957XK100 as a finish coat, because exterior durability is poor and will result in rapid chalking and fading.

This thixotropic and accelerated material just requires the proper amount and type of methyl ethyl ketone peroxide catalyst to cure at room temperature. It should not be used at temperatures below 20°C.

TYPICAL LIQUID PROPERTIES

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 and testing equipments (type and procedure) can each have a significant effect on the test results. Materials with properties outside of these ranges can perform acceptably.

Test

Value

Viscosity at 25°C: (Brookfield RVF, spindle No.4 at 4 rpm)	10,000 – 15,000 cps
Thixotropic Index at 25°C: (Brookfield RVF, spindle No.4, Speeds 2 and 20 rpm)	5.0 – 6.5
Flash Point:	31°C
Volatile Organic Compound:	38 – 42%
Reactivity at 25°C, using 1.8% of MEKP-925	
Gel Time:	10 – 15 minutes
Lay-up Time:	30 – 90 minutes

APPLICATION:

957XK100 appears to be very thick in the container. It is important to mix the material (before each use) to break down this high viscosity.

Do not over-mix. Over-mixing can break down barrier coat viscosity, increasing its tendency to sag and cause styrene loss which could cause porosity tendency. Material should be mixed no more than 10 minutes per day on an "as needed" basis.

Meaning:

- 1) If settling occurs,
- 2) If viscosity builds up and material becomes hard to pump. The barrier coat should be mixing to the sides 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.

Preferred method of application is spray, either conventional or air atomized, air assistance 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. Do not spray less than 16 mils wet (Thinner layer will not cure properly and can actually cause worse blisters than if there was no barrier coat at all).

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

For optimum results, uniform catalyst mix must be achieved. Even with the equipment properly calibrated, potential problems can occur due to poor catalyst atomization, surging problems, 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 to recheck the gel time in the customer plant because age, temperature, humidity and catalyst will produce varied gel times.

Alternative catalysts may be used including:

Butanox LA, Andonox LCR-S, Peroximon K12,
Luperox DHD, Butanox M50, etc...

Catalyst level should not exceed 3.0% or fall below 1.2% for proper cure, with 1.8% at 25°C being ideal. Normally the barrier coat film is ready to lay-up within 90 minutes.

This time frame is dependent on material temperature, room temperature, humidity, air movement and catalyst concentration.

Best results are obtained when used at temperatures above 20°C. Cure properties below 20°C are questionable and can adversely affect the final properties.

STORAGE LIMITATIONS:

Uncatalyzed, this product has a usage life of 60 days from the date of manufacture when stored at 23°C or below in a closed, factory-sealed, opaque container, and out of direct sunlight. This usage life is cut in half for every 10°C over 23°C. Totes of product have even shorter usage life (66% of the usage life mentioned above for drums).

POLYESTER SAFETY INFORMATION

All sales of products manufactured by CCP Composites Korea and described herein are made solely on condition that our customers comply with applicable health and safety laws, regulations and orders relating to the safe 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 personal protective equipment 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 breathe or ingest vapour, spray mists and dusts caused by applying, sanding, grinding and sawing polyester products. Wear an appropriate OSHA approved, properly fitted respirator during application and use of these products until vapours, mists and dusts are exhausted, unless air monitoring demonstrates vapours, 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 Transport as a flammable liquid. Flammable polyester products should be kept away from heat, sparks and flame. Lighting and other electrical systems in the workplace should be vapour-proof and protected from breakage.

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

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 code) before using.

FIRST AID: In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If affected by inhalation of vapours or spray mist, remove to fresh air. If swallowed, get medical attention.

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.

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 or 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.

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.

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