POLYCOR®

944W125
USDA Isophthalic Gel Coat

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Description

POLYCOR® 944W125 white USDA isophthalic gel coat is a high quality coating developed for the fiberglass industry. This gel coat provides a quality finish, which delivers good chemical/water resistance, gloss retention, weatherability, and resiliency. An untinted straight white gel coat, 944W125, is in the color match “C” category, meaning that batch-to-batch color variation can occur.

This gel coat has been specifically formulated to meet USDA incidental food contact requirements (see attached letter of approval), i.e. components used to make 944W125 are USDA acceptable.

NOTE: 944W125 is acceptable for “USDA incidental food contact” applications only.

944W125 is NOT acceptable for use in the construction of potable water tanks, nor is 944W125 acceptable for construction of food processing tanks (FDA applications).

Other color versions of 944W125 (off-whites only) are available on request. Contact a Polynt Composites representative if further information is desired.

Typical Properties (77°F)

These values may or may not be manufacturing control criteria; they are listed as 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. Gel coats with properties outside of these ranges can perform acceptably.

Test	POLYCOR® 944W125
Viscosity (1)	18,000 cps
Thixotropic Index (2/20)	6.5
Flash Point	88°F
Volatile Organic Compound	35.2-37.2%
Weight per Gallon	10.6-10.9 lbs
Gel Time (2)	15.5 minutes
Lay-up Time	45-60 minutes
Sag Resistance	Good at 20 mils
Hide	Complete at 8-13 mils wet
Color Match	CMC maximum DE of 1 unit

(1) Brookfield RVF #4 Spindle @ 4 rpm

(2) Method POLYNT-22-TAS-TM-515.2, 100 g mass, 1.8% United Initiators Norox® MEKP, 77 °C

Application

Do not overmix POLYCOR® 944W125. Overmixing 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.

POLYCOR® 944W125 is formulated for both airless and conventional spray applications. Neither brushing nor rolling is recommended. Refer to PB-16 (Application Guide) and PB-3 (Equipment Selection) Bulletins for additional specific recommendations.

Polynt 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.

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 (gel coat or catalyst); poor tip alignment (catalyst to gel coat mix); contamination; and poor application procedures 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.

Avoid overspray settling on mold surfaces by beginning spray pattern closest to the vapor/air exhaust and progressing to the opposite mold end. Maintain recommended spray distances from the mold surface.

For best overall 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 are more susceptible to water blisters. Films above 24 mils may pre-release, trap porosity, or crack, and are more subject to weathering discoloration. If water blisters are of a great concern (boat hulls), 20 to 24 mils would perform better than a thinner film, but resistance to sag, porosity and cracking could suffer. If weathering (yellowing from sunlight, decks) is of great concern, then thinner films (12 to 16 mils) would perform better, but patchability and resistance to print-through and blistering could suffer.

Proper mold maintenance is important. Although 944W125 has excellent patching properties, minimal repair work is always desirable. Sanding and compounding can hasten the chalking and loss of gloss of all gel coats.

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 Arkema Luperox® DDM-9 catalyst. United Initiators Norox® MEKP-9 and Norox® MEKP-9H, Akzo Nobel CADOX L-50a and CADOX D-50 are expected to yield similar performance. Arkema Luperox® DHD-9, United Initiators Norox® MEKP-925 and Norox® MEKP-925H, and Pergan HP-90 may yield slightly shorter gel and cure times.

The catalyst level should not exceed 3.0% or fall below 1.2% for proper cure. Recommended range is 1.2% to 3.0% with 1.8% at 77°F being ideal. Normally, the gel coat film is ready for lamination in 45 to 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 60°F, as curing may be adversely affected.

Caution

Isophthalic gel coats are not compatible in the liquid state with ISO/NPG gel coats or ISO/NPG resins. Spray and pumping equipment must be completely clean of these gel coats or resins before isophthalics can be used.

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

Storage

Uncatalyzed, 944W125 has a shelf life of 120 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 shelf life is cut in half for every 20°F over 73°F. Totes of product can have even shorter shelf life – 66% of that for drums.

SDS / Data Sheets

SDS and data sheets can be obtained by contacting your Polynt representative or Polynt Customer Service at 800-322-8103.

POLYNT SAFETY INFORMATION

All sales of products manufactured by Polynt Composites USA Inc. and described herein, are made solely on condition that Polynt Composites USA 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 Safety Data Sheet pertaining to each product.

Most 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 or dusts caused by applying, sanding, grinding and sawing products. Wear an appropriate NIOSH/MSHA approved and 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 12th Report on Carcinogens issued by the National Toxicology Program lists styrene as a “reasonably anticipated” carcinogen, but the Report cautions that the NTP listing does not mean that styrene presents a risk to persons in their daily lives. The Styrene Information and Research Center does not agree with the classification as it did not include a review of all available data. SIRC states: “HHS included styrene in the 12th RoC despite the fact that European Union regulators have determined styrene does not represent a human cancer concern. E.U. scientists reviewed the full styrene database, weighing all of the available data in reaching their conclusion.”

The International Agency for Research on Cancer (IARC) reclassified styrene as Group 2B, "possibly carcinogenic to humans." This revised classification was 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 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 products should be kept away from heat, sparks, and flame. Lighting and other electrical systems in the workplace 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.

Some products may contain additional hazardous ingredients. To determine the hazardous ingredients present, their applicable exposure limits and other safety information, read the 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 USA representative or from: Polynt Composites USA Inc., 99 East Cottage Avenue, Carpentersville, IL 60110, 800-322-8103.

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 vapors or spray mist, remove to fresh air. If swallowed, get medical attention.

Those 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 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.

LIMITED WARRANTY AND LIMITATION OF LIABILITY

LIMITED WARRANTY.

Seller warrants that: (i) Buyer shall obtain good title to the product sold hereunder, (ii) at shipment such product shall conform to Seller's specifications for the product; and (iii) the sale or use of such product will not infringe the claims of any U.S. patent covering the product itself, but Seller does not warrant against infringement which might arise by the use of said product in any combination with other products or arising in the operation of any process. **SELLER MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO SELLER. ANY ADDITIONAL REPRESENTATIONS OR SUGGESTIONS REGARDING THE PRODUCT OR ITS POSSIBLE USES ARE BASED UPON SELLER'S GOOD FAITH OPINION AND BELIEF, BUT ARE NOT TO BE CONSTRUED AS AFFIRMATIONS OF FACT, PROMISES, OR DESCRIPTIONS, AND SHALL IN NO WAY BE DEEMED PART OF THE SALE OF PRODUCT.** In particular, and without limiting the foregoing, because of environmental and use conditions beyond Seller's control, Seller offers no warranty and makes no promise concerning the results that may be obtained by the Buyer (or the Buyer's customer) with the product or the performance of the product. Each user should satisfy itself, by adequate testing, of the suitability of the product for its particular application.

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(a) Seller's total liability for any claim arising out of or in connection with this contract, including for breach of contract, warranty, statutory duty, or for other tort, including seller's negligence, shall not exceed the purchase price of such product as to which such liability arises. Seller shall not be liable for any injury, loss or damage, resulting from the handling or use of the product shipped hereunder whether in the manufacturing process or otherwise. **IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF PROFITS, CAPITAL OR BUSINESS OPPORTUNITY, DOWNTIME COSTS, OR CLAIMS OF CUSTOMERS OR EMPLOYEES OF BUYER, WHETHER IN AN ACTION UNDER CONTRACT, NEGLIGENCE OR ANY OTHER THEORY, ARISING OUT OF OR IN CONNECTION WITH THIS CONTRACT, OR THE USE, INABILITY TO USE, OR PERFORMANCE OF THE PRODUCT.**

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The information provided is believed to be accurate at the time of preparation, or prepared from sources believed to be reliable, but it is the responsibility of user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use.