

EASTMAN

Improve appearance and color stability in acrylic wood lacquers

Eastman **SOLUS**[™]
performance additives



Application overview

Consumers, retailers and manufacturers have high standards for wood lacquers. Consumers who buy white or light-colored wood products expect them to retain their vibrancy and avoid materials of concern. Retailers need light-colored wood products to look great in the showroom. And manufacturers want a lacquer that is safe and easy to handle and apply, dries quickly, and can be easily repaired using lacquer solvents.

Eastman Solus™ performance additives for acrylic wood lacquers address these needs. Specifically, wood lacquers based on Solus™ do not yellow — which is critical for light wood or finishes, especially when formulated with acrylic co-resins. These lacquers enable consumers to match old and new furniture — versatility that can expand product lines for manufacturers. And Solus™ performance additives allow consumers, retailers and manufacturers to avoid the hazards that are associated with nitrocellulose.

Solus™ performance additives are available in a variety of product compositions to provide formulation and application benefits. Solus™ can be used in thermoplastic lacquers, which rank among the most versatile wood finishes. These lacquers offer ease of repair and handling, film clarity and faster drying. The ability to “reflow” an acrylic lacquer based on Solus™ with a solvent or gentle heat makes it easy to remove lint, scratches or fingerprints.

The high T_g of Solus™ reduces dry-to-touch handling times, resulting in faster production rates. Unlike nitrocellulose, Solus™ products are nonflammable and can be handled as dry powder with a long shelf life.



To highlight the superior performance of Solus™ compared to nitrocellulose, coated samples were placed in a QUV-B chamber (313 nm wavelength) for 32 hours to simulate damage caused by the sun. The coating with nitrocellulose lacquer started to yellow after only two hours. After 32 hours, the nitrocellulose sample was severely yellowed. The coating with Solus™ was stable under UV light and retained a high degree of whiteness.

Figure 1 contrasts the difference between a white wood lacquer based on Solus™ and one based on nitrocellulose.

Eastman has specific Solus™ grades for wood lacquers because they have enough molecular weight to pass hardness and cold-check requirements, yet they have low enough viscosity to meet typical solids content of 20%–25%.

Eastman's technical service laboratories created a starting point formulation that can be used as is or modified with other resins. (If significant changes are made, resin compatibility, viscosity, application performance and subsequent film performance should be discussed with your Eastman representative.) Eastman can provide formulation help to minimize compatibility, adhesion or hardness issues. For the starting point formulation used, contact your Eastman representative.

Figure 1. UV stability of white wood lacquer based on Eastman Solus™ vs. nitrocellulose





Summary

The appearance and durability of lacquers based on Solus™ have been demonstrated in the wood coatings industry. Consumers appreciate clean, water-white finishes that do not yellow over time. Manufacturers and applicators need lacquers that dry quickly and minimize surface contamination while avoiding handling hazards. Its ease of use makes Solus™ the safer, cost-effective film former of choice for wood coating formulators around the world.

For help selecting the best Solus™ product for your needs, contact your Eastman representative or authorized distributor.

For nearly a century, Eastman has been the world leader in manufacturing specialty cellulose esters and has developed deep application expertise. Eastman Solus™ can help formulators achieve high performance, enduring beauty, sustainability and regulatory compliance. Because of the breadth of possibilities, this naturally derived cellulosic is ideal for many applications. It offers the consistency and quality that formulators require and brand owners rely on. Eastman Solus™ — the natural choice.

EASTMAN

Eastman Corporate Headquarters

P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other locations, +(1) 423-229-2000

eastman.com/locations

Although the information and recommendations set forth herein are presented in good faith, Eastman Chemical Company ("Eastman") and its subsidiaries make no representations or warranties as to the completeness or accuracy thereof. You must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment, or formulation in conflict with any patent, and we make no representations or warranties, express or implied, that the use thereof will not infringe any patent. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND NOTHING HEREIN WAIVES ANY OF THE SELLER'S CONDITIONS OF SALE.

Safety Data Sheets providing safety precautions that should be observed when handling and storing our products are available online or by request. You should obtain and review available material safety information before handling our products. If any materials mentioned are not our products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

© 2024 Eastman. Eastman brands referenced herein are trademarks of Eastman or one of its subsidiaries or are being used under license. Non-Eastman brands referenced herein are trademarks of their respective owners.