

Enhancing Adhesion with Myribond®

Adhesion Promoting Resin for Laminating and UV Coating



“Golden Performance and Greener Solution without Price Premium”

Enhancing Adhesion with Myribond®

Myribond® adhesion-promoting resin is made from Myriant's renewable **bio-succinic acid** and is a cost effective resin for use in laminating or coating systems, especially for flexible substrates. Myribond® is optically clear. It provides enhanced adhesion to both low energy and high energy substrates including polyester, polyolefins, glass, metal, and aluminum. Myribond® offers a combination of resilience, flexibility and yellowing resistance coupled with adhesion and bears no "green" price premium.

Applications

UV-Cure Coating

UV-curable coatings involve unsaturated resin(s) formulated in combination with acrylate/methacrylate monomers and a photoinitiator. Traditional UV-curable coatings have difficulty adhering low-energy substrates such as polyester, polypropylene, and polyethylene as well as high-energy substrates like glass and metal or metallized foil. **Myribond® is an excellent choice for adhesion in UV systems, particularly in applications with low- and high-energy substrates.**

Myribond® can be used as the main resin or in combination with traditional acrylate/methacrylate systems. While this resin cures easily with UV irradiation, Myribond® also responds well to thermal or oxidative curing mechanisms, especially when combined with metal driers and/or peroxide catalysts.

Typical Properties	
Acid Value	200 mg/KOH
Viscosity	1750 cPs
Color	<2 Gardner
Clarity	Clear
T _g , homopolymer	< 0°C

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UV Formulation with Myribond®: Low- and High-Energy Substrates

One representative formulation is shown below as an example; formulations should be verified by the user.

	Oligomer	Irgacure 184 (phr)
Myribond®	100%	5

The above composition was used to adhere metal foil to polypropylene. Lamination was achieved by pulling down each sample onto the metal foil substrate with a 3 Mayer rod, then a sheet of polypropylene film was laid on top and smoothed with a roller. Samples were passed under a UV lamp, receiving a total of ~480 mJ/cm² in 3 passes at 150 ft/min. T-pull tensile testing to remove the laminated layers was performed with the following parameters:

- 1 inch/min pull
- 1 inch sample width
- 350 second duration

Sample	T-pull force (grams)
Commercially available MAES*	76.9
Proprietary, commercial available laminating adhesive	98.4
Myribond®	117.7

*mono-2-(acryloyloxy) ethyl succinate, CAS: 50940-49-3, blended with 3phr Irgacure 184

Myribond® greatly enhances adhesion to both low-energy and high-energy substrates, providing improved performance for lamination and coating applications.

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Summary

Myribond® can be used to increase adhesion to both low- and high-energy substrates.

In addition, Myribond® brings ancillary benefits including a thermal/oxidative curing response as well as depth curing, especially when combined with a metal drier and/or a peroxide. Myribond® demonstrates a post-tack development character, making it ideal for repositionable laminating applications.

Myribond®

- ◇ Adheres to a variety of substrates
- ◇ Contributes to tough, flexible coatings with cycloaliphatic character
- ◇ Contains substantial bio-renewable content with no price premium

SAMPLES AVAILABLE! Order today by calling

**+ 1 617.657.5200 or visiting
www.gcinnovationamerica.com.**

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