

Micronax 340-50 DEV

Micronax 340-50 DEV is a REACH-compliant* and APEO-free microsphere adhesive designed to deliver strong adhesion to rough, difficult-to-bond substrates, such as high-recycled-content corrugated cardboard. It combines high adhesion with reliable printability through direct thermal printers. The product offers excellent mechanical stability and low foam generation during coating. It is suitable for direct coating using processes such as Mayer rod, slot-die, gravure, and roll coating. Franklin can also provide formulation customization to align with specific processing requirements. Transfer coating is generally not recommended for this system.

PHYSICAL PROPERTIES

Polymer Type: *Acrylic Copolymer*

Protective System: *Surfactant Stabilized*

Color: *White*

Viscosity (cps): *700-1400 (RVF, Spindle #3/50 RPM, 77°F)*

Percent Solids: *50-54%*

pH: *6.0-8.0*

Freeze/Thaw Stability: *Unstable*

Density: *8.5*

Shelf Life: *7 months*

FDA Compliance: *21 CFR 175.105 on facestocks similar to polyester, paper, vinyl, and biaxially oriented polypropylene (BOPP)*

*REACH compliant subject to import regulations

PERFORMANCE PROPERTIES

A 0.5 mil (14g/m²) dry film of **Micronax 340-50 DEV** cast directly onto 1 mil thickness polyester film will exhibit the following average performance properties when tested on #304 stainless steel, which has a #3 surface finish.

Test	Typical Values	Target Range
180° Peel Adhesion ¹ (lb/in)	1.5	1.0 – 2.0 maximum
Loop Tack ² (lb/in ²)	1.2	1.0 – 2.0 maximum

¹Franklin International 03QC5002, 30-minute dwell.

²Franklin International 03QC5004, 1 square inch contact, 1 second dwell.

STORAGE & HANDLING

Micronax 340-50 DEV will separate during storage; agitate at moderate speed with an appropriate air mixer prior to use (a small vortex should be visible). Continuous agitation is not required during production coating. Protect from freezing and temperatures ≥98°F. For best results, store below 85°F.

IMPORTANT NOTICE TO CUSTOMER:

The recommendations and data contained in this Product Data Sheet for use of this product are based on information Franklin believes to be reliable. They are offered in good faith without guarantee, as conditions and methods of use of our product by Customer are beyond Franklin's control. Customer must determine the suitability of the product for a particular application before adopting it on a commercial scale. All orders for Franklin products shall be subject to Franklin International, Inc.'s Standard Terms and Conditions of Sale which may be found at http://www.franklin.com/Terms_and_Conditions.aspx ("Standard Terms"). Different or additional terms proposed by Customer are expressly rejected and shall not become part of the agreement between Customer and Franklin International, Inc. with respect to any order. Contact Franklin International, Inc. immediately if you cannot access our Standard Terms and we will provide you a copy upon request. Any sale of products by Franklin to Customer is expressly conditional upon Customer's consent to the Standard Terms, and Customer's acceptance of any performance by, or receipt of products from, Franklin International, Inc. shall constitute Customer's acceptance of the Standard Terms and Conditions of Sale.

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Wood Adhesives
Pressure Sensitive Adhesives
Specialty Polymers

Technical Information Sheet 81507

Pressure Sensitive Adhesives Determining Developmental Products' Specification Ranges

This document explains how specification ranges are established for new developmental adhesives and polymers (designated as "DEV") from initial production through full commercialization (removal of DEV status).

Franklin follows the **Stage-Gate Process®** for developing new polymers and adhesive formulations. Customer requirements are captured at the initial stage. During development, Franklin technical personnel and customers evaluate lab and pilot samples, which are labeled as experimental (EXP) batches. To advance an EXP product to Franklin production, at least three replicated lab and pilot batches are produced. From these batches, target ranges are defined based on critical-to-quality parameters agreed upon by Franklin's technical team and the customer. These values are then integrated into Franklin's QC and Production System, creating a DEV product.

Next, a minimum of eight consecutive production batches must be manufactured without changes to the polymer, formulation, or process. All eight batches must pass customer evaluation and meet application requirements. Final product specifications are set based on these batches, with customer approval. At this point, the product is no longer considered developmental, and the DEV designation is removed. Specification ranges may be adjusted based on statistical analysis of production data, using **3 Sigma limits**, and incorporated into Franklin's QC and Production System.

Typically, target ranges evolve from initial production through commercialization, often resulting in broader specification limits. Customers are notified of any changes.

ZS 01/06/2026

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