**Covinax 424-39 DEV**

**REACH Compliant High Tack Permanent**

*Covinax 424-39 DEV* is our next generation coater-ready surfactant stabilized vinyl acrylic copolymer for general purpose permanent pressure sensitive adhesives in tape and label applications. This product is built using our proprietary polymerization process that produces very high performance properties. *Covinax 424-39 DEV* has a good balance of peel and tack, which allows it to be used in a wide variety of applications. It exhibits excellent adhesion to corrugate, polyolefin films, glass and metals. It displays excellent converting properties with its high cohesive strength. *Covinax 424-39 DEV* can be transfer coated on most rod, gravure or roll coaters. This product is APE-free, formaldehyde-free and meets FDA requirement 21CFR 175.105.

### PHYSICAL PROPERTIES

- **Polymer Type:** Vinyl Modified Acrylic Copolymer
- **Color:** White
- **Protective System:** Anionic Surfactant
- **Viscosity (cps):** 100 - 400 cps (RVF, Spindle #2/100 RPM/77°F)
- **Percent Solids (%):** 57.0 - 59.0
- **pH:** 5.4 - 7.0
- **Weight Per Gallon:** 8.7
- **Freeze/Thaw Stability:** No
- **Shelf Life:** 6 months
- **Glass Transition Temperature (Tg):** (DSC): -40.2°C

### PERFORMANCE PROPERTIES

A 1 mil (28 g/m²) dry film of *Covinax 424-39 DEV* cast directly onto 1 mil thickness polyester film will exhibit the following average performance properties when tested on #304 stainless steel (#3 surface finish).

<table>
<thead>
<tr>
<th>Test</th>
<th>Typical Values</th>
<th>Target Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>180° Peel Adhesion¹</td>
<td>3.7 lb (1678 g)</td>
<td>&gt;1.8 lb (816 g)</td>
</tr>
<tr>
<td>Loop Tack²</td>
<td>3.4 lb (1542 g)</td>
<td>&gt;1.8 lb (816 g)</td>
</tr>
<tr>
<td>178° Shear Adhesion²</td>
<td>30 minutes</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Minimum Application Temperature:** >32°F  
**Service (Use) Temperature:** 20°F to 250°F

**NOTE:** Minimum application and service temperatures are dependent upon many factors including face stock, adhesive coat weight, adhesion, and intended application. We can only offer an estimate based on the Tg and typical performance properties of the adhesive.

**FDA Compliance:** 21CFR 175.105

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¹Franklin International 03QC5002, 30 minute dwell.  
²Franklin International 03QC5003, 0.25 square inch, 500 gram load, 10 minute dwell.  
³Franklin International 03QC5004, 1 square inch contact, 1 second dwell.
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.

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Technical Information Sheet 81507

Pressure Sensitive Adhesives
Determining Developmental Products’ Specification Ranges

This Technical Information Sheet reviews how specification ranges are created for new developmental adhesives and polymers (labeled as “DEV”) from initial production through commercialization (removal from DEV status).

Franklin utilizes the Stage Gate Process for developing new polymers and adhesive formulations. Customer requirements are entered into the initial stage of the process. During the developmental process, lab and pilot samples are normally created and tested by Franklin technical personnel as well as by the customer for approval. These samples are labeled as experimental (EXP) batches.

In order for the EXP product to move to Franklin production, at least three replicated lab and/or pilot batches are made. From these batches, target ranges are calculated using 3 sigma limits and are incorporated into Franklin’s QC and Production System, creating a DEV product.

Once at least eight consecutive production batches are made without changes to the formulation or process, the product specifications are set based on these batches, the product is no longer developmental and the DEV designation is removed.

In most cases, target ranges will change from initial production batches through the commercialization process. Often this results in a shift, and possibly a broadening, of the specification ranges. The customer is notified of these changes.

DGP 11/12/2018