

Pressure Sensitive Adhesives

Covinax 289-01 DEV All-Temp PSA

Covinax 289-01 DEV is an APE-free, formaldehyde-free permanent adhesive designed for cold temperature applications requiring high peel and tack adhesion. Covinax 289-01 DEV is transfer coatable on most commercial grade silicone liners and specifically formulated to coat on Gravure, Slot-Die and Roll coaters. Labels and tapes utilizing Covinax 289-01 DEV will adhere well to LSE (Low Surface Energy) substrates including LDPE, HDPE and BOPP. Dry films are clear and will not yellow due to age or UV absorption.

PHYSICAL PROPERTIES

Polymer Type: Acrylic Copolymer Protective System: Anionic & Non-Ionic Surfactants Color: White Viscosity (cps): 250 - 700 cps (RV#3/50RPM/77°F) Percent Solids (%): 58.0 - 62.0 pH: 5.0 - 7.0 Weight Per Gallon: 8.6 lb. Glass Transition Temperature (Tg): On-Set (DSC): -45.9°C Mid-Point (DSC): -40.5°C

PERFORMANCE PROPERTIES

A 1 mil (28g/m²) dry film of Covinax 289-01 DEV cast directly onto 1 mil thickness polyester film will exhibit the following average performance properties when tested on #304 stainless steel with a #3 surface finish.

Test	Typical Values	Target Ranges
180° Peel Adhesion ¹ (lb)	2.8	2.2 minimum
Loop Tack ³ (lb)	2.3	2.0 minimum
178° Shear Adhesion ² (minutes)	40	20 minimum
<i>Minimum Application Temperature:</i>	10°F to 20°F	N/A
Service (Use) Temperature:	-20°F to 250°F	N/A

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: 21 CFR 175.105

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







STORAGE AND HANDLING

Shelf life: Best if used within three months of date of manufacture. Mix before use for best results. Product is not freeze/thaw stable.

For additional questions, Franklin's technical service team is available at 1.800.877.4583. **24/7** technical service is available online at <u>www.franklinadhesivesandpolymers.com</u>.

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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Wood Adhesives Pressure Sensitive Adhesives Specialty Polymers

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, <u>target ranges</u> are calculated using 3 sigma limits and are incorporated into Franklin's QC and Production System, creating a DEV product.

After at least eight consecutive production batches are made without changes to the formulation or process, the <u>product specifications</u> are set based on these batches. The product is then 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.

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