Covinax 169-00
High Tack Packaging Adhesive

Covinax 169-00 *is a polyvinyl alcohol stabilized vinyl acrylic copolymer emulsion developed for a variety of permanent pressure sensitive applications requiring very aggressive tack. It exhibits outstanding adhesion to most synthetic films, including treated and untreated polyethylene and polypropylene, Tyvek and Cryovac. It performs well in low temperatures and is widely used in packaging applications both formulated and as a straight polymer. Covinax 169-00 can be formulated into a wash-away adhesive by the addition of a nonionic surfactant. The polyvinyl alcohol colloid allows easy cleanup and imparts excellent machining. It can be applied with a knife, rod, roller coater or extruded in beads for various packaging applications. Covinax 169-00 is FDA compliant under 21CFR 175.105, 21CFR 176.170, and 21CFR 176.180.*

PHYSICAL PROPERTIES

Polymer Type: *Vinyl Modified Acrylic Copolymer*
Protective System: *Polyvinyl alcohol*
Color: *White*
Viscosity (cps): *1600 - 3400 (LVF, Spindle #4/60RPM/77° F)*
Percent Solids (%): *58.0 - 60.0*
pH: *4.5 - 5.5*
Weight Per Gallon: *8.5*
Shelf Life: *4 months*
Freeze/Thaw Stability: *Unstable*
Glass Transition Temperature (Tg): (DSC): *-42.8° C*

PERFORMANCE PROPERTIES

A 1 mil (28g/m^2) dry film of ***Covinax 169-00*** *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	Specification Range
180° Peel Adhesion[1] (lb)	3.6	3.0 minimum
178° Shear Adhesion[2] (minutes)	27	5 minimum
Loop Tack[3] (lb)	3.2	2.5 minimum

Minimum Application Temperature:	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: *21CFR 175.105*
21CFR 176.170
21CFR 176.180

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

AVERAGE APPLICATION PROPERTIES

TEST/SUBSTRATE	Facestock: Paper				Facestock: BOPP Film			
	LDPE	HDPE	Vinyl	Corrugate	LDPE	HDPE	Vinyl	Corrugate
180° peel (lb/lineal inch width) 30 minute dwell	PT	PT	PT	PT	3.5 C	3.7 C	3.8 C	PT
90° peel (lb/lineal inch width) 30 minute dwell	2.1 A	2.4 A	6.0 T	1.5 A	1.6 A	1.7 A	4.9 A	1.4 A
Loop Tack (lb)	2.9	4.3	6.5	3.1	1.6	3.6	4.6	1.5

	Facestock: Paper	Facestock: BOPP Film	Facestock: Mylar
178° Shear (500 g, 0.25 in²) (minutes)	27 C	34 C	27 C
SAFT Testing (min/temp° C)	39/62.3° C	27.3/62.3° C	31.3/66.3° C
Substrate: Stainless Steel		Coat weight: 1.0 mil (+/-0.1 mil)	

A = Adhesive C = Cohesive FP = Fiber pick PT = Paper Tear T = Transfer

ADDITIONAL INFORMATION

Yellowing *(Colorimeter "b" value)*

UV Exposure *(1 week)* Mylar		Heat Exposure *(1 week @ 140° F)* Paper	
Before	After	Before	After
4.64	7.02	2.60	4.35