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TECHNICAL DATA SHEET

Novacote NC-7109+ CA-27 LAMINATING ADHESIVE

PRODUCT DESCRIPTION	:	Novacote NC-7109+CA-27 is a solvent based two component polyester polyurethane adhesive for dry bond laminating of film/film, film/metallized films and film/foil structures. Cured adhesive remains slightly soft and therefore good for metallized films laminations.				
PRODUCT REFERENCE	:	NC- 7109 (-OH component)	CA-27 Co-reactant (-NCO component)			
SOLID CONTENT	:	(75 ± 2) %		(75 ± 2) %		
VISCOSITY	:	2000-6000 mPas @ 25°C			1200-3000 mPas @ 25°C	
DILUENT	:	Ethyl Acetate (urethane grade only).				
MIX RATIO BY WEIGHT	:	(A) Mix Ratio: 100:25				
			<u>Running solids</u>			
			<u>25%</u>	<u>30%</u>	<u>35%</u>	<u>40%</u>
			<u>45%</u>			
		NC-7109:	100	100	100	100
		Ethyl acetate :	250	188	143	109
		CA-27:	25	25	25	25
		<hr/> Total	375	313	268	234
		<hr/> Viscosity at 25 °C (DIN 4 cup)	12	13	15	17
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MIXING INSTRUCTIONS	:	Mix NC-7109 in Ethyl Acetate first followed by co-reactant, CA-27.				
DYNAMIC PAN-LIFE	:	24 hrs (tested at 35% running solids in Ethyl Acetate at 35 °C/100% rh)				
APPLICATION METHOD	:	Gravure coating or smooth roll coating.				
DRYING CONDITIONS	:	Forced hot air (60-90 °C) sufficient to remove the solvent. Exhaust must be efficient to remove solvent vapours from the drying tunnel.				
NIP TEMPERATURE	:	50-70 °C				
DRY COATING WEIGHT	:	2-4 gsm				

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CURING TIME	:	Bond immediately off the machine is good. Maximum heat and product resistance will develop within 5-10 days. Higher curing temperatures (e.g., 40-50 °C for 3-5 days) will accelerate curing rate, and give better heat and product resistance properties.
PRE-TREATMENT OF FILMS	:	For polyolefin films, corona treatment is mandatory. Pretreatment will improve the adhesion obtained with polyester film and some nylon films. Recommended corona treatment level on common films is as follows: PE, PP films: 38 dynes/cm; PET, BON: 52 dynes/cm; metallized films: 38-40 dynes/cm.
STORAGE AND SHELF-LIFE	:	NC-7109 and CA-27 are flammable liquids. Store under dry conditions at 5 - 30°C, and away from direct sunlight. Close the containers after each use especially co-reactant, which is highly sensitive to moisture. Use up the products as soon as possible once the containers are opened. Otherwise, purging of the containers with dry air or nitrogen gas is recommended. Shelf life is 6 months in original unopened containers stored away from heat, direct sunlight and rain.
REGULATORY STATUS	:	<p>For the manufacturing of NOVACOTE NC-7109 and CA-27 only monomers and other starting substances and additives are used, which are listed in:</p> <ul style="list-style-type: none"> • Regulation 10/2011/EC of 14 January 2011 and amendment and/or • Code of Federal Regulations 21 § 175.105 (Adhesives) <p>NOVACOTE NC-7109 and CA-27 are manufactured in accordance with guideline 94/62 and do fulfill the mentioned limit of <100ppm for lead, cadmium, mercury and chromium(VI).</p> <p>NOVACOTE NC-7109 and CA-27 do not contain BHT, BHA, TPP, BPA, BADGE, BFDGE or NOGE.</p>
IMPORTANT NOTE	:	Before we introduce a new adhesive to the marketplace, the adhesive is comprehensively tested in our own laboratories. However, because of the hundreds of possible film combinations and the different printing ink systems used in various parts of the world, as well as the diversity of food, cosmetics, medical devices and pharmaceuticals that may be packaged in laminates made with our adhesives, we <u>cannot</u> possibly forecast their performance under all circumstances. Therefore, we strongly urge our customers to test our adhesives on a small scale to establish that laminates made with our products are suitable for the end uses for which they are intended prior to commencing large-scale productions.

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