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We believe that success is achieved through true partnerships with suppliers and customers. That's why our team works as an extension of your team—focused on success we achieve together. We can help you uncover new opportunities—and give you market intelligence on the chemical industry that keeps you ahead of changing conditions.



Business Agility

Our sales and support technology is fast and smart—with versatile ordering and delivery options, automated confirmations, and tracking.



Fresh Perspective

Our dedicated team works closely with you, and we're always available. We provide both broad industry perspective and specialized knowledge on your market and industry segment.



Genuine Partnership

Our long-standing relationships with top manufacturers in the chemical industry give you a competitive edge. We provide information and insight straight from the source.



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LAMINATING ADHESIVES PRODUCT SELECTION GUIDE

DOW LAMINATING ADHESIVES ADCOTE™, LAMAL™, ROBOND™, MOR-FREE™ AND PACACEL™

ChemPoint partners exclusively with the Dow Chemical Company to offer our customers a broad selection of flexible packaging adhesives for a range of applications. Dow Chemical has a long and notable history in the adhesives marketplace, with a product portfolio filled with proven premium names and trusted workhorses. Dow offers a comprehensive range of products in solvent, water-based and solventless adhesives systems. Having such a strength in all three chemistries offer a distinct advantage to customers. Products are only half the story though as we maintain technical expertise in lamination and converting, exceptional analytical capabilities and a full-scale pilot facility to make qualification and testing simpler for the customer.



MOR-FREE™ L SOLVENTLESS LAMINATING ADHESIVE PRODUCT GUIDE

MOR-FREE™ and PACACEL™ solventless laminating adhesives are 100% solids, two-component polyurethane adhesive systems that offer fast processing efficiencies and improved system economics. adhesive's offer a broad range of performance in food packaging applications.

TYPICAL PHYSICAL PROPERTIES

MOR-FREE™ ADHESIVE PRODUCT	VISCOSITY @77°F/25°C(CPS)	MIXED VISCOSITY @104°F/25°C (CPS)	POTLIFE @ 104°F/40°C(MIN)	BOND STRENGTH/TIME
MOR-FREE™ 1390A/C33	3,700	2200	33	400gli/3-4 days
MOR-FREE™ L75-164/C411	2,500-3,500	1700	27	300gli/3-6 hrs
MOR-FREE™ 421/C145	2,500-3,500	1200	41	300gli/3-6 hrs
Pacacel™ L75-191/CR89	3,000	1000	30	300gli/4-8 hrs

TYPICAL CHARACTERISTICS

	MOR-FREE™ 1390/C33	MOR-FREE™ L75-164/C411	MOR-FREE™ 421/C145	PACACEL™ L75-191/CR89
Aliphatic	*			
Aromatic		*	*	*
FDA Compliance	21 CFR 175.105 21 CFR 177.1395 21 CFR 177.1390 No EU	21 CFR 175.105 21 CFR 177.1395(C-H, J with limitations No EU	21 CFR 175.105 No EU	21 CFR 175.105 21 CFR 177.1395(B-H) EU Compliant
Cure Time/Temperature to meet FDA Regulations	14 Days at 77°F(25°C)	3 Days at 77°F(25°C)	NA	2 Days at 77°F(25°C)
Cost Effective Fast Cure	NA	Good	Good	Excellent
Room Temperature Curing	Slower, hot room advised	*	*	*
Maximum Line Speeds/ appearance	1000 FPM	1300 FPM	1300 FPM	1300+ FPM
Metal Adhesion	Moderate	Good	Good	Good
Use with Clear Barrier Substrates	Test first	*	*	*
Controlled Tear	(With ratio change)			
Time to Slit or Further Process	5-7 days	4-8 hrs	6-12 hrs	4-8 hrs
Time to insert Zipper	5-7 days	24 hrs	24 hrs	24 hrs
Ease of Clean Up	Excellent	Excellent	Excellent	Excellent
Fills	Aggressive fills; fatty foods; dry and aqueous fills	Aggressive fills; fatty foods; dry and aqueous fills	Moderately aggressive fills; fatty foods; dry and aqueous fills	Aggressive fills; fatty foods; dry and aqueous fills
Applications	Film/Film and clear barrier structures (lidded shelf stable trays etc. Outdoor bag applications	Freezer-to-microwave-to table; Fresh produce-to-Table; Dry goods and snack foods; Non-retort, wet shelf stable foods	Dry Goods and snack foods; refrigerated packaging; non-microwaved frozen foods	Freezer-to-microwave-to table; Fresh produce-to-Table; Dry goods and snack foods; Non-retort, wet shelf stable foods
Comments	Good for UV exposure, Hot room advised for faster processing	Good run ability at low temperatures; higher FDA; rapid room temperature cure	Good run ability at low temperatures; price competitive; rapid room temperature cure	Broadest FDA up to retort, excellent high speed run ability, fast RT cure and fast PAA decay; EU compliant

ROBOND™ L AND AQUA-LAM™ WATER-BORNE LAMINATING ADHESIVE PRODUCT GUIDE

Dow offers a broad line of water-borne dry bond laminating adhesives. The chemistries include acrylic hybrid urethanes and polyurethane dispersions(PUDS). They cover a broad range of end-use applications from snack food and bottle labels up to and including microwaveable and boil-in-bag food applications. These products are supplied “machine ready” and offer fast slit and ship times.

QUICK USE GUIDE AND PERFORMANCE PROFILE

	ROBOND™ L-90M	ROBOND™ L-148	ROBOND™ L-330	ROBOND™ L-2150	AQUA-LAM™ 444A
Coreactant	Alone or CR9-101	CR9-101	CR9-101	CR9-101	CR7-103
Mix Ratio	100:2	100:2	100:2	100:4	100:11.5
Film/Foil		X	X	X	
Metalized Films	X	X	X	X	
Film/Film	X	X	X	X	Specifically, Aclar/PVC
EVA Films	X	X	X		
White PE/EVA	X	X	X		
Product Resistance	Fair	Better	Best	Best	NA
Pasteurization of film laminates	Not Recommended	Not Recommended	Best		NA
Pasteurization of foil laminates	Not Recommended	Not Recommended	Best		NA
Heat Resistance	Fair	Better	Best	Best	Better
FDA Status	175.105	177.1395	177.1395	175.105	175.105
Primary end Use	Labels, Wrappers, snack packaging	Sachets, Portion Packs, Pouches “Warm fill”, Vacuum Packs, Coffee	Sachets, Portion Packs, Pouches “Warm fill”, Vacuum Packs, Coffee	Industrial flexible packaging IE Duct hose, Insulation facing, motor windings	Medical Packaging, see though blister laminations

ADCOTE™ AND LAMAL™ SOLVENT-BORNE ADHESIVE PRODUCT GUIDE

ADCOTE™ and LAMAL™ adhesives comprise a family of laminating products used in a variety of food, medical, and industrial packaging applications. Solvent-borne adhesives have been the mainstay in the packaging industry due to their proven track record and broad versatility in a variety of end use applications.

BASIC PERFORMANCE

PRODUCT	CO-REACTANTS	CURE TIME	USEABLE WITH	APPLICATIONS
Lamal™ HSA	Lamal™ C Lamal™ CR1-80	5 days ambient	PE; PP; Coex films; PET;PVDC-coated substrates; Paper; Nylon; Cellophane; PVC	Solvent-sensitive films; Meat & Cheese packaging; Barrier packaging; Bread packaging; Rice bags; Snack foods; Structures requiring more heat and chemical resistance then Adcote™ 331 with optical clarity

BROAD PERFORMANCE

PRODUCT	CO-REACTANTS	CURE TIME	USEABLE WITH	APPLICATIONS
Adcote™ 522	Adcote™ 522B, Adcote™ 532B	7 days ambient	PE; PP; PET; Foil; Nylon; PVC	Coffee Bags; Condiments; Freeze pops; Snack bags; Meat & Cheese packaging; High-slip-polyolefins with no change of COF: Note: use 532B for higher metal bonds and faster cure rate
Adcote™ 555	Adcote™ 536B	3 days ambient	PE; PP; High-slip films; Coex films; Nylon; PET; Foil; PVC	Coffee pouches; Snack foods; Condiments; Meat & Cheese packaging
Adcote™ 577	CR 87-124	3 days ambient	PE; PP; Coex films; PET; Foil; Metalized films; PVDC-coated substrates; Paper; Nylon; Cellophane; PVC	General Food Packaging; Medical Packaging; Coffee; Snack foods; Aggressive fill applications; Condiments; Lidding; Chemical Packaging
Adcote™ 545E	Co-reactant F, Co-reactant CT, Co-reactant 9L10	5 days ambient 4 days ambient 5 days ambient	PE; PP; Coex films; PET; Foil; Metalized films; PVDC-coated substrates; Paper; Nylon, Cellophane; PVC	General food packaging; Medical packaging; Coffee; Snack foods; Aggressive fill applications; Condiments; Lidding; Chemical packaging

SPECIAL PERFORMANCE

PRODUCT	CO-REACTANTS	CURE TIME	USEABLE WITH	APPLICATIONS
Adcote™ 503E	Co-reactant F Co-reactant CT Co-reactant 9L10	7 days ambient 7 days ambient 10 days ambient 7 days for retort(120°F/50°C)	PE; PP; Coex films; Metalized films; PET; Foil; PVDC coated substrates; Nylon; Cellophane; PVC	Stand-up pouch; Iodine pouch; Agricultural packaging; Chemical packaging; Medical & Pharmaceutical packaging; Aggressive fill applications
Adcote™ 102E	Co-reactant F Co-reactant CT Co-reactant 9L10	7 days ambient	PE; PP; Coex films; Metalized films; PET; Foil; PVDC coated substrates; Nylon; Cellophane; PVC	Stand-up pouch; Iodine pouch; Agricultural packaging; Chemical packaging; Aggressive fill applications; Applications for outdoor exposure(only with CR 9L10)
Adcote™ 812	Adcote™ 811B, Co-reactant 9L10	10 days ambient 3-5 days for retort(120°-130°F/50°-55°C) 10 days for retort(120°F/50°C)	PE; PP; Coex films; Metalized films; PET; Foil; PVDC coated substrates; Nylon; Cellophane; PVC; Paper	Retort structures; Hotfill; Refrigerated drinks; Stand-up pouches; Specialty applications requiring extreme heat, chemical and environmental resistance; Medical & Pharmaceutical packaging

CHARACTERISTICS MATRIX ADCOTE™ AND LAMAL™

ADCOTE™	522	555	577	545E	503E	102E	812	LAMAL™HSA
Alcohol Dilutable								+
Amine/epoxy Cure								+
Broad application with variety of films & foils	+	+	+	+	+	+	+	
Easy Running	+	+	+	+			+	+
Economical		+	+	+				
Recommended for high slip films	+++	++	++	+	+	+	+	
Heat and chemical resistance	+	++	++	+	+++	+++	+++	+
Foil/polyolefin	+++	++	+++	+	+++	+++	+++	
High running solids		++	++	+++				
High tunnel resistance		+	++	+			++	+
Long pot life			++	+			++	
Low nip temperature		+++	+	+++				+++
Not affected by atmospheric moisture								+++
No interference in cure from alcohol-containing solvents								+++
No NCO content								+++
No outgassing								+++
Retort compliant					+++	+++	+++	
Solubility in milder solvents								+++
Stable adhesion to metalized films & foils	+++	+++	+++	+++	+++	+++	+++	
UV resistant					+++*	+++*	+++	

*Suitable co-reractant
Good Performance +, Very Good Performance ++, Excellent Performance +++

UNITED STATES FDA COMPLIANCE

Dow is proud of its proactive and vigilant stance toward its understanding of and compliance to U.S. FDA regulations. FDA regulations can be quite complex, and Dow carefully evaluates its adhesives for compliance with the various regulations used in food packaging. We recognize the complications of a global supply chain and work to ensure compliance across the board. Choosing a supplier with strong regulatory expertise helps converters, brand owners, and end-users makes the best decisions about selecting food contact materials.

BASIC PERFORMANCE

PRODUCT	CO-REACTANTS	175.105	177.1395	177.1390
Lamal™ HSA	Lamal™ C	Yes	No	No
	Lamal™ CR1-80	Yes	No	No

BROAD PERFORMANCE

PRODUCT	CO-REACTANTS	175.105	177.1395	177.1390
Adcote™ 522	Adcote™ 522B	Yes	No	No
	Adcote™ 532B	Yes	No	No
Adcote™ 555	Adcote™ 536B	Yes	No	No
Adcote™ 577	CR 87-124	Yes	Yes	No
Adcote™ 545E	Co-reactant F	Yes	No	No
	Co-reactant CT	Yes	No	No
	Co-reactant 9L-10	Yes	No	No

SPECIAL PERFORMANCE

PRODUCT	CO-REACTANTS	175.105	177.1395	177.1390
Adcote™ 503E	Co-reactant F	Yes	No	No
	Co-reactant CT	Yes	No	No
	Co-reactant 9L-10	Yes	Yes	Yes
Adcote™ 102E	Co-reactant F	Yes	No	No
	Co-reactant CT	Yes	No	No
	Co-reactant 9L-10	Yes	Yes	Yes
Adcote™ 812	Adcote™ 811B	Yes	Yes	Yes
	Co-reactant 9L-10	Yes	Yes	Yes

PRODUCT GRADE	GENERAL FOOD PACKAGING, SNACKS, CONFECTIONARY LABELS													
	MEAT AND CHEESE		BARRIER PACKAGING		OUTDOOR BAG		MEDICAL PILL PACKAGING		AGGRESSIVE FILL, DODGE, INDUSTRIAL, CHEMICALS, MEDICAL AND PHARMA		COFFEE, CONDIMENTS, LIQUID FILL STAND-UP POUCHES		FREEZER APPLICATIONS	
	HOT FILL AND MICROWAVE		RETORT		MAP PACKAGING		INDUSTRIAL							
Product/end use														
ROBOND L-90M/9-101	X													
ROBOND L-148/9-101	X	X	X	X	X			X	X	X				
ROBOND L-330/9-101	X	X	X	X				X		X				X
ROBOND L-2150/9-101														X
AQUA-LAM 444A/CR 7-103						X								
MOR-FREE 1390A/C33				X								X	X	
MOR-FREE L75-164/C411	X	X							X	X	X			
MOR-FREE 421/145	X									X				
PACACEL L75-191/CR89	X	X							X	X	X			
LAMAL HSA/LAMAL C	X	X	X											
ADCOTE 522/522B	X	X							X	X				
ADCOTE 555/536B	X	X							X					
ADCOTE 577/CR 87-124	X	X						X	X	X	X			X
ADCOTE 545E/F	X								X					X
ADCOTE 503E/F								X			X			X
ADCOTE 102E/F				X	*			X						X
ADCOTE 812/811B				X				X	X	X	X	X		

* With aliphatic co-reactant 9L10



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WE HAVE
ANSWERS.
WE'RE READY
FOR YOUR CALL.

