



**OVERLAYS OR BACKERS FOR WOOD VENEER, PLYWOOD, PARTICLE BOARD, PAPER, FOAM, HONEYCOMB, ETC**

**Overlay and Backers Comparison Sheet**

Many pre-coated with dry film adhesive. Products available in rolls or sheets. We will be happy to test any combination and provide a free lab report. Please contact us for further information.

REV 10.13.21

Overlays/Backers	White	Grey	6	7	20	24	170TS	160TS	160TSM	204TSA	100L	296	330TS*	360	374
Thickness	.010"	.006"	.025"	.025"	.008"	.006"	.005"	.010"	.010"	.005"	.001"-.010"		.005"	.001"-.008"	.001"-.010"
Minimum Glue Line Bonding Temp	No Glue	No Glue	No Glue	No Glue	225°F+	250°F	290°F/140°C	260°F/127°C	275°F/135°C	290	220°F - 250°F		275°F/135°C	170°F	275°F/135°C
Press Time At Full Temp (Glue Line)	NA	NA	NA	NA	Seconds	5 - 6 Minutes	30 Seconds	30 Seconds+	2 Minutes	1 Minute	10 Seconds		1 Minute+	10 Seconds	10 Seconds
Minimum Pressure - PSI	-	-	-	-	100 PSI	70 PSI ±	100+ PSI	85 PSI	100 PSI	150 PSI	10 PSI		90-150 PSI	10 PSI	50 PSI
Heat Resistance	-	-	-	-	200°F	Thermo-Set	Thermo-Set	Thermo-Set	400°F	Thermo-Set	190°F		Thermo-Set	Thermo-Set	250°F
Need Release Sheet	-	-	-	-	Yes	Yes	Yes	No	No	Yes	Yes		Yes	Yes	Yes
Type of Adhesive					EVA	Phenolic	Acrylic/Fleece	Woven Cellulose	Melamine/Acrylic	Phenolic	PE	Melamine	Acrylic/Melamine	Urethane	Polyster
Color	White	Grey	Tan	White	Any	Brown	Translucent	Clear/Brown/Tan/Black	Cream	Tan	Semi-Clear	Clear	Translucent/White	Clear	Clear
Adhesive Can Reactivate For 2nd Bonding					Yes	Yes	No	No	No	No	Yes	Yes	No	No	Yes
Water Resistance	Yes	Yes	Yes	Medium	Yes	Very Good	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flame Resistance	Yes	No	Yes	Yes	Possible	Yes	No	Optional	Possible	Medium	No	Yes	No	No	No
Flexibility	Medium	Medium	Rigid	Medium	Excellent	Medium	Good	3D Moldable	Yes	Low	Excellent	Medium	3D Moldable	Yes	Good
Printability	Yes	Yes	Yes	Medium	Good	no	Fair	Fair	Yes	Fair	Good	Medium	Yes	Yes	Good
Shelf Life Before Laminated	Any	Any	Any	Any	1 Year +	6 Months	6 Mo.+ @ 75°F	6 Mo.+ @ 75°F	6 Months	6 Mo.+ @ 75°F	1 Year +	6 Months	6 Mo.+ @ 75°F	1 Year +	1 Year +
Can Be Flexed	Yes	Yes	Med	Yes	Yes	Medium	Yes	Yes	Yes	Yes	Yes	Medium	Yes	Yes	Yes
Used For:	Paintable Overlay	Best For Painting, Saves on Paint, Smooth	Laminating, Painting, Overlay Doors & Partitions or on Honeycomb	Laminating, Painting, Overlay Doors & Partitions or on Honeycomb	Carpet Backing, Non-Slip, White	Plywood Surface, Extreme Bond, Water Proof	Backer for Perforated Wood Veneer	Backer for Wood Veneer, Wood Veneer Strengtheners, For Flexing	Cover Metals, Backs, Metals, Injection Mold	2 Ply Thermo-Set Overlay, Water Resistant	Pre-Applied Adhesive, Balance, Non-Slip Surface	Overlay, Hard, Clear, Scratch Resistant	2 Ply Balance, Water Resistant	Low-Temp Pre-Applied Adhesive	Pop Bottle Boat To Australia, Bonded
Surface		Opaque, Extra Smooth, Saves on Paint	Opaque, Stiff, Medium Smooth	Opaque, Solid White, High Fiber	Film, Clear, White	Release Coating, Water Proofing	Translucent Backer, Balance	Cloth, FSC Certified, Fiber/Fabric	Fabric-Like, Printable	Balance	Balance, Adhesive	Must Breathe	Thermo-Set Adhesive, Balance	Non-slip Overlay, Balance, Adhesive	Clear Overlay, Balance, Adhesive
Panel Balancing	Yes	Yes	Yes	Medium	Medium	Yes	Medium	Medium	Yes	Yes	Yes	Yes	Yes	Medium	Yes
Sewing	Medium	Yes	No	Yes	Yes	No	No	Yes	No	Yes	No	No	No	Yes	Yes
Clear Overlays	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No	Yes	Yes
Translucent (Light Transfer)	Medium	No	No	Medium	Yes	Yes	Yes	No	No	Medium	Yes	Yes	Yes	Yes	Yes
Perforates	Yes	Yes	Med	Yes	Yes	Some	Yes	Yes	Yes	Yes	Yes	Some	Yes	Yes	Yes
Laser Cuts	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Die Cuts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

  

Overlays/Backers	444	710TS	Clear Overlay Film*	Foils	3D, Compressible Natural Fiber Mat	Engineer Core Veneer	Fold & Mold 3D*	Glass Fiber, Matt	Liquid	Melamine	Plywood	PolyBak	Powder	Rubber	Wood Veneer
Thickness	.001"-.004"	.005"	.002"-.020"	.001"-.003"	Any	.062"-.125"	.017"-.100"	0.055"	Any	.010"-.020"	Any	.062"-.125"	.010"-.25"		
Minimum Glue Line Bonding Temp	275°F/135°C	260°F/130°C	180°F - 250°F	Dribond Adhesive	300°F	Varies	225°F+	Per Order	607°F	225°F+	Varies	100°F	Dribond	Varies	
Press Time At Full Temp (Glue Line)	30 Seconds	1 Minute	10 Seconds+	1 Minute	1 Minute+	Varies	20 Seconds	Varies	1-12 Hours	1 Minute	Varies	30 Seconds	2-3 Minutes	Varies	
Minimum Pressure - PSI	150 PSI	100 PSI	10 PSI+	20+ PSI	50 PSI	Varies	10+ PSI	Varies	0	Varies	Varies	14 PSI	10 PSI	Varies	
Heat Resistance	240°F	Thermo-Set	180°F+	200 Dribond Adhesive	200°F	300°F	200°F	Varies	Varies	Thermo-Set	Variable	No	Varies	Variable	300°F
Need Release Sheet	Yes	Yes	No	No	No	No	No	0	0	Yes	No	No	No	No	No
Type of Adhesive	Copolyamid	Melamine	Varied	Dribond	Varies	Varies	#20+	Varies	Varies	Melamine	Varies		Varies	Varies	Varies
Color	Clear	Clear/White	Clear/Any	Reflective	Tan To Black	Varies	White/Grey/Pink	White	Clear	Teak	Varies	Ivory/Brown	Varies	Black	Varies
Adhesive Can Reactivate For 2nd Bonding	Yes	No	Yes	Yes	Yes	Varies	Yes	Per Order	No	Some	Varies	Yes	Yes	Yes	Varies
Water Resistance	Good	Yes	Yes	Yes	Good	Varies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Varies
Flame Resistance	Fair	Yes	Possible	Yes	Available	Medium	Possible	Yes	Medium	Possible	No	Available	Possible	Possible	
Flexibility	Good	Fair	3D Moldable	3D Moldable	Available	Medium	3D Moldable	Good	Yes	Low	Good	Varies	Medium	Good	Good
Printability	Good	Yes	Yes	Yes	Medium	Good	Yes	Fair	Medium	Yes	Medium	Yes	Medium	Poor	Good
Shelf Life Before Laminated	6 Mo.+ @ 75°F	6 Mo.+ @ 75°F	1 Year +	1 Year +	2 Years +	1 Year +	Per Order	2 Year	Some	Unlimited	1 Year	1 Year +	1 Year +	1 Year +	
Can Be Flexed	Yes	Medium	Yes	Medium	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Used For:	For Flooring, PVC, Vinyl	Overlay Countertops, High Wear, Rigid, Embossable	Protective Overlay	Reflective, Deco	3D Shapes, Auto, Furniture, Partitions	Dashboards, Metal, Stiffens, Tight Edge Fills	Core, 3D Parts, Signs, Lamphshades, Partitions, Tackable	Acoustic, Extreme Fire Retard	Extreme, HI Lo Gloss	Clear Overlay	Builds & Stiffens Wood Surface, Screw Hold	Rigid Backer, Multiple Layers for Thicker Pieces	Fabric, Headliners, Automotive Fibers	Non-Slip Backer for Carpet & Mats	3D, Décor, Glueable
Surface	Clear, Balance, Adhesive	Overlay, Clear, Fleece/Resin	Surface Protection, Printable, Erasable, High Wear, 18,000 Tabor Balance	Balancing Backer	Sheet & Pressed Fibers, Natural & Poly, Depends on Density & Pressed	Smooth	Printable, Balance, Adhesive	Core, Breathable, Hydrophobic	Crystal Clear	Many, Varies, Sanded	With or Without Adhesive Backer	Varies	Surface protection and non slip cushion	Any Specie Sanded	
Panel Balancing	Yes	Yes	Yes	Yes	Yes	Yes	Medium	Medium	Yes	Yes	Yes	Medium	Poor	Yes	
Sewing	No	No	Yes	Some	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	
Clear Overlays	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No	No	
Translucent (Light Transfer)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	
Perforates	Some	Yes	Yes	Some	Yes	Some	Yes	Some	Yes	Some	Yes	Yes	Yes	Some	
Laser Cuts	Yes	Yes	Yes	Some	Yes	Yes	Yes	Some	Yes	Yes	Yes	Yes	Yes	Yes	
Die Cuts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

\*Separate spreadsheet available

In most cases above, the bonding strengths are a function of the following 5 components:

1. **TEMPERATURE** The temperature at the glue line should be checked with a "K" Thermo Couple Thermometer from Cole Palmer (Catalog #91100-10) at www.colepalmer.com or call (800) 323-4340. In addition, you will need "K" type adapter plugs (Catalog #93840-52) and a spool of very fine teflon coated wire (Catalog #08541-02). Lenderink Technologies, Inc. will be happy to supply you with all of the above materials together for approximately \$250.00.

2. **PRESSURE** = 
$$\frac{\text{Hydraulic Line Pressure (lbs)} \times \text{Surface Area of Cylinders (in}^2\text{)}}{\text{in}^2 \text{ of Material Being Pressed}}$$
 \*Stacks or multiple pieces can be pressed at one time.

3. **TIME** When the glue line is at full temperature and pressure. Pressing time is often related to temperature and pressure. Higher temperature/pressure settings often allow for a shorter cycle time.

4. **SURFACES** Surfaces being bonded must be compatible with particular dry film adhesive being used. Surfaces must also have compatible energy and texture.

5. **VAPOR/OFF GASSING** Pre-press at full temperature and low pressure before adding Lenderink Dry Film Adhesive, i.e. vapors vacated from surfaces. Vapors cause bubbles and /or poor bonds. Moisture contents of wood should be below 8%, press breathing may be needed.

The above 5 components can be varied some and still provide good bonds. i.e. Temperature increase can often allow for pressure decrease and vice-versa. Extremely slick surfaces may have improved bonds if Corrona Treated and sanded. Start as close to our recommendations as possible. Vary from the recommendations only one variable at a time. If any questions, please feel free to contact us.

Please send samples to our lab for adhesive recommendations so that we may test the material.

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