

THERMO BONDING ADHESIVES THERMOSET DRY FILM ADHESIVES

Heat Activated Dry Film Adhesives Comparison Sheet

commendations below have all been tested and proven. If your substrate is not marked, it has not been tested and may work fine. We will be happy to test any combination and provide a free lab report. Please contact us for further information.

								REV 01.03.20
Thermo Set Adhesive	3D Thick*	Crystal Clear	2	4	24	152	204TSA	330TS
Thickness	.030"100"	Any	.006"	.005"	.006"	.005"	.005"	.008"
Minimum Glue Line Temp Under Full Temp & Pressure	220∘F	Liquid	270∘F+	250-290°F+	250∘F+	290∘F	225∘F	275 - 300∘F
Minimum Time In Minutes	10 Seconds	15 Minutes	3 Minutes	5 - 6 Minutes	5 - 6 Minutes	1 Minute	6 Minutes	2 Minutes
Minimum Pressure - PSI	10 PSI	0	85 PSI	70 PSI ±	70 PSI ±	215 PSI	150 PSI	90 PSI ±
Color	White/Pink/Grey	Crystal Clear	Transluscent	Light Tan	Brown	Beige/Tan/Transluscent	Tan	White/Clear
Carrier	Mixed	None	None	Fleece	Fleece	Thin Fleece	Tissue/Transluscent	Cellulose Blend
Base Resin	Blended/Recycled	Urethane	Melamine	Melamine	Phenolic (Modified		Phenolic	Acrylic/Melamine
Fire Retardant	Variable	Possible	Yes	Yes	Yes	No	Yes - Medium	No
Flexibility	Variable	Good	Yes	Med	Medium	Good	Medium	Good
Surfaces To Be Bonded	3D Thick*	Crystal Clear	2	4	24	152	204TSA	330TS
Aluminum	•	e Crystal Clear	•	•	•	0	0	33013
	•	•	•	•	•	•	•	0
Carbon	<u> </u>	•	•	•		•	•	
Cork		_			•			•
Cotton	•	•	•	•	•	•	•	•
Leather	•	•	•	•	•	0	•	•
Melamine	•	•	•	•	•	0	0	•
Paper	•	•	•	•	•	•	•	•
Polyester	•	•	•	•	•	0	0	•
Phenolic	•	•	•	•	•	0	•	•
Wood Veneer	•	•	•	•	•	•	•	•
Chipboard	•	•	•	•	•	•	•	•
Wool	•	•	•	•	•	•	•	•
2-Ply Faces	•	•	•	•	•	•	•	•
Glass	•	•	•	•	•			
*3D Forming Modified Thermo-Set	Amazing thicker	Self leveling, clear	Extra light weight,	3D Shapes, Can be	Low cost, Low PSI,	Used for joint,	Low cost, work	Light color for ash
**Epoxy Certified	innerply or	UV extra bond	translucent, easy	colored, Low cost	Exterior, Best for	splices, backer for	horse	and maple, bonds
	backer, cold forms		to handle, no		outdoor	perforating,		balancing backer,
	to perfect long		bleed, bending,			backer for		2ply Inlay Faces,
	lasting 3D shapes,		3D shape			transluscent		Easy to handle
	low cost, low					microwood		
	pressure tooling							
Thermo Set Adhesive	581TS	710TS	831DS	S3E	Epoxy Film**	Powder	Liquid	Metal Bond
Thermo Set Adhesive Thickness	581TS .005"	710TS .005"	831DS Varied	S3E Any	Epoxy Film** .001"005"	Powder Any	Liquid .001"010"	Metal Bond .005"
	.005"							
Thickness	.005"	.005"	Varied	Any	.001"005"	Any	.001"010"	.005"
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI	.005" 275°F 3 Minutes 175 PSI	.005" 275°F 4 Minutes 150 PSI	Varied Varied	Any 50°F+	.001"005" 325°F 2 Minutes 50 PSI	Any 60 - 280∘F	.001"010" 70°F+	.005" 275°F 1 - 3 Minutes 50 PSI
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes	.005" 275°F 3 Minutes 175 PSI Dark	.005" 275°F 4 Minutes 150 PSI Light Tan	Varied Varied 30 Seconds 14 PSI ± Transluscent	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass	.001"005" 325°F 2 Minutes 50 PSI Clear	Any 60 - 280°F 10 Seconds 14 PSI Varies	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear	.005" 275°F 1 - 3 Minutes 50 PSI Clear
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier	.005" 275°F 3 Minutes 175 PSI Dark Tissue	.005" 275°F 4 Minutes 150 PSI Light Tan Tissue	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands	.001"005" 325°F 2 Minutes 50 PSI Clear None	Any 60 - 280°F 10 Seconds 14 PSI Varies None	.001"010" 70°F+ 15 - 60 Minutes 14 PSI	.005" 275°F 1 - 3 Minutes 50 PSI Clear None
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin	.005" 275°F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic	.005" 275°F 4 Minutes 150 PSI Light Tan Tissue Melamine	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste	.001"005" 325°F 2 Minutes 50 PSI Clear None Epoxy (Med)	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear	.005" 275°F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med)
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant	.005" 275°F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No	.005" 275°F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme	.001"005" 325°F 2 Minutes 50 PSI Clear None Epoxy (Med) Available	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear	.005" 275°F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility	.005" 275°F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium	.005" 275°F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium	.001"005" 325°F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good	Any 60 - 280 F 10 Seconds 14 PSI Varies None Varies Available Varies	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275°F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275°F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 5881TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581T5	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • •	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70 F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581T5	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • •	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581T5	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium 53E • • • • • • • • • • • • • • • • • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond • • • • • •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium 53E • • • • • • • • • • • • • • • • • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond • • • • • • • • • •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280 F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond • • • • • • • • • • • • • • • • • •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70 F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder • • • • • • • • • • • • • • • • • •	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond • • • • • • • • • • • • • • • • • •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS • • • • • • • • • • • • • • • • • •	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS • • • • • • • • • • • • • • • • • •	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium 53E • • • • • • • • • • • • • • • • • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70 F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass *3D Forming Modified Thermo-Set	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280 F 10 Seconds 14 PSI Varies None Varies Available Varies Powder	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond • • • • • • • • • • • • • • • • • •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS O O Backer, translucent, clear	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS Adhesive, one or two sides of web,	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder Acoustic application,	.001"010" 70 F+ 15 - 60 Minutes 14 PSI Crystal Clear None	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass *3D Forming Modified Thermo-Set	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS O O Backer, translucent, clear	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS	Any S0°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder Acoustic application, reactivates,	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None Liquid Liquid Self-leveling, hi or	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond • • • • • • • • • • • • • • • • • •
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Filexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass *3D Forming Modified Thermo-Set	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS O O Backer, translucent, clear	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS Adhesive, one or two sides of web, special, Highly water resistant,	Any S0°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280=F 10 Seconds 14 PSI Varies None Varies Available Varies Powder Acoustic application, reactivates, breathes, adds	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None Liquid Liquid Self-leveling, hi or	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass *3D Forming Modified Thermo-Set	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS O O Backer, translucent, clear	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS Available Adhesive, one or two sides of web, special, Highly water resistant, Cement form	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325-F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280°F 10 Seconds 14 PSI Varies None Varies Available Varies Powder Acoustic application, reactivates, breathes, adds stiffness to Fiber	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None Liquid Liquid Self-leveling, hi or	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass *3D Forming Modified Thermo-Set	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS O O Backer, translucent, clear	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS Adhesive, one or two sides of web, special, Highly water resistant,	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • Expanding gap filling, minimize vibrations for flexibility, bonds in watercraft, blocks out dust	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280=F 10 Seconds 14 PSI Varies None Varies Available Varies Powder Acoustic application, reactivates, breathes, adds	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None Liquid Liquid Self-leveling, hi or	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond
Thickness Minimum Glue Line Temp Under Full Temp & Pressure Minimum Time In Minutes Minimum Pressure - PSI Color Carrier Base Resin Fire Retardant Flexibility Surfaces To Be Bonded Aluminum Carbon Cork Cotton Leather Melamine Paper Polyester Phenolic Wood Veneer Chipboard Wool 2-Ply Faces Glass *3D Forming Modified Thermo-Set	.005" 275-F 3 Minutes 175 PSI Dark Tissue Mod. Phenolic No Medium 581TS	.005" 275-F 4 Minutes 150 PSI Light Tan Tissue Melamine Yes Fair 710TS O O Backer, translucent, clear	Varied Varied Varied 30 Seconds 14 PSI ± Transluscent Spun Web Varies Available Excellent 831DS Available Adhesive, one or two sides of web, special, Highly water resistant, Cement form	Any 50°F+ 4 Minutes 16 PSI Beige/Chopped Glass Expands Urethan Paste Yes - Extreme Medium S3E • • • • • • • • • • • • • • • • • •	.001"005" 325=F 2 Minutes 50 PSI Clear None Epoxy (Med) Available Good Epoxy Film**	Any 60 - 280-F 10 Seconds 14 PSI Varies None Varies Available Varies Powder Acoustic application, reactivates, breathes, adds stiffness to Fiber and Fiber mats	.001"010" 70°F+ 15 - 60 Minutes 14 PSI Crystal Clear None Liquid Liquid Self-leveling, hi or	.005" 275-F 1 - 3 Minutes 50 PSI Clear None Epoxy (Med) Available Good Metal Bond • • • • • • • • • • • • • • • • • •

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 = Hydraulic Line Pressure (lbs) X Surface Area of Cylinders (in2)

*Stacks or multiple pieces can be pressed at one time.

in2 of Material Being Pressed

- 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 Fim 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.