

# Product Selector Guide

Resin System	Description	Outlife at 68°F (Days)	Initial Cure Temp (°F)	Initial Cure Time (Hours)	Post Cure Option	Max Tg Onset* (°F – DMA)	Max Tg Peak* (°F – DMA)	Toughened	Standard Process	Typical Application Areas
<b>TOOLING PREPREG – Low Temperature Cure</b>										
LTC102	Epoxy Carbon/Glass Tooling	3	85 – 150	45 – 5	Yes	417	450	No	Autoclave	Commercial low temp tooling
LTC210	Epoxy Carbon/Glass Tooling	4	115 – 160	40 – 4	Yes	396	430	No	Autoclave	Commercial low temp tooling
LTC216-3	Epoxy Carbon/Glass Tooling	7	115 – 160	50 – 5	Yes	424	468	No	Autoclave	Aerospace low temp tooling
LTC410	Epoxy Long Outlife Tooling	21	150 – 175	16 – 4	Yes	378	424	Yes	Autoclave	Long outlife, toughened, low temp Aerospace tooling
LTC400	Epoxy Long Outlife Tooling	30	150 – 175	24 – 6	Yes	405	442	No	Autoclave	Extra long outlife, low temp Aerospace tooling
OTS65	Epoxy Oven Cure Tooling	Up to 21	150 – 195	Consult Data Sheet	Yes	264	289	No	Oven	Out of Autoclave tooling & structures
BX180-220	Benzoxazine Tooling	12 months	355	2	Yes	444	482	No	Autoclave	High temp Aerospace tooling
BMI-1SC	BMI Tooling & Component	30	365	2	Yes	662	671	Yes	Autoclave	High temp, high durability Aerospace Tooling
<b>ADHESIVE FILM</b>										
MTFA500	Adhesive Film	30	175 – 250	16 – 1	No	286	302	Yes	Autoclave	General purpose film adhesive
VTFA400	Adhesive Film	21	150 – 250	16 – 1	Yes	275	297	Yes	Autoclave	General purpose film adhesive with versatile cure
MTFA400	Adhesive Film, High Temperature Service	28	175 – 300	16 – 1	Yes	338	374	Yes	Autoclave	General purpose, higher service temp
<b>COMPONENT PREPREG – Low to Medium Temperature Cure</b>										
LTC250-2XL	Low Temp Cure	5	120 – 165	40 – 4	Yes	266	291	Yes	Autoclave/Oven	Lower temp cure with good toughness and visual clarity. Excellent for low cost prototypes
MTC510	Med Temp Cure, Cosmetic & General Purpose	30	175 – 250	16 – 1	No	284	298	Yes	Autoclave	General purpose system also with excellent optical clarity for cosmetic carbon parts
MTC275	Med Temp Cure, Out of Autoclave	30	175 – 250	16 – 1	No	250	275	Yes	Autoclave/Oven	General purpose system also with excellent optical clarity for cosmetic carbon parts. Can process OOA
MTC475	Med Temp Cure, High Service Cosmetic	30	175 – 250	16 – 1	Yes	374	403	Yes	Autoclave	Higher service temp system with good visual finish
MTC811	Med Temp Cure, Core Bondable	60	195 – 250	14 – 1	No	250	262	Yes	Autoclave	Highly toughened system for structures requiring good damage tolerance and impact performance
MTC400	Med Temp Cure, High Temp Structural	30	175 – 275	16 – 1	Yes	441	460	Yes	Autoclave	High service temp (typically up to 356°F) components in Motorsport, Automotive and Aerospace. 320°F wet Tg
MTC400-1	Med Temp Cure, High Temp Structural	30	175 – 275	16 – 1	Yes	405	435	Yes	Autoclave	Higher service temp (typically up to 302°F) structural components in Automotive and Motorsport
MTC412	Med Temp Cure, High Temp Service OOA	28	175 – 300	16 – 1	Yes	338	374	Yes	Autoclave/Oven	High service temp and Out of Autoclave processing typically for Aerospace applications
<b>COMPONENT PREPREG – Versatile Temperature Cure</b>										
VTC401	General Purpose, Fast Cure Component Core Bondable	21	150 – 285	16 – 15 mins	Yes	289	304	Yes	Autoclave/Oven/Press	Versatile system. Low temp cure on lower cost large structures, but also with high temp "snap" cure capability
VTC410	General Purpose, Fast Cure Component	21	150 – 285	16 – 15 mins	Yes	374	403	Yes	Autoclave/Oven/Press	Versatile system. Low temp cure for lower cost, larger structure with increased service temperature
VTC212	Oven Component System	21	150 – 250	16 – 1	Yes	275	284	Yes	Oven	Versatile system with good Out of Autoclave processing for high quality surface finishes
OPS75	Oven Panel System	Up to 21	150 – 265	Consult Data Sheet	No	284	320	Yes	Autoclave/Oven	Automotive body panels with excellent retained surface finish once environmentally cycled
APS75	Autoclave Panel System	21	150 – 265	Consult Data Sheet	Yes	338	376	Yes	Autoclave	Automotive body panels with higher service temp
<b>COMPONENT PREPREG – High Service Temperature</b>										
HTC400	High Temp Cure, High Service Temp	30	355	2	No	505	522	Yes	Autoclave	High service temp Automotive and Aerospace structures
CEL100-1	Cyanate Ester, Low Temp Cure	2	160 – 195	22 – 6	Yes	565	592	No	Autoclave	High service temp with a required postcure, suitable for Automotive components
CEM100	Cyanate Ester, Very High Service Temp	21	250 – 275	3 – 2	Yes	653	752	No	Autoclave	High service temp Automotive and Space components with low-outgassing requirements
CEM160	Cyanate Ester, High Service Temp, Available on UD reinforcements	Up to 21	250 – 275	3 – 2	Yes	527	572	No	Autoclave	High service temp Automotive and Space components with low-outgassing requirements
<b>COMPONENT PREPREG – Flame Retardant</b>										
FRVC411	Flame Retardant, Core Bondable	21	150 – 250	16 – 1	Yes	311	349	Yes	Autoclave/Oven/Press	Flame retardant (can meet UL94 V0) Aerospace and Automotive structures
MTC510-1FRB	Flame Retardant, Med Temp Cure	30	175 – 250	16 – 1	No	266	298	Yes	Autoclave	General purpose flame retardant system
PS200	Flame Retardant, Bio-based	21	210 – 265	3 – 1	Consult SHD	662	734	No	Autoclave/Oven/Press	Bio-derived, highly flame retardant system for fire containment applications such as battery enclosures

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\* Tg and service temperatures quoted in this Product Selector Guide are maximum values, possibly achieved after a post cure cycle depending on the product. Please consult Technical Data Sheets for details.

SHD Composites continuously reviews and updates its Product Selector Guide and Technical Data Sheets. Please ensure that you have the current version, by contacting your SHD Composites sales contact and quoting the issue date.

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