Product Selector Guide

Resin System	Description	Outlife at 20°C (Days)	Initial Cure Temp (°C)	Initial Cure Time (Hours)	Post Cure Option	Max Tg Onset* (°C – DMA)	Max Tg Peak* (°C – DMA)	Toughened	Standard Process	Typical Application Areas
TOOLING PREPREG — Low Temperature Cure										
LTC102	Epoxy Carbon/Glass Tooling	3	30 – 65	45 – 5	Yes	214	232	No	Autoclave	Commercial low temp tooling
LTC210	Epoxy Carbon/Glass Tooling	4	45 – 70	40 – 4	Yes	202	221	No	Autoclave	Commercial low temp tooling
LTB300	Epoxy Carbon/Glass Tooling – 30% bio-based	2	45 – 60	12 – 6	Yes	181	205	No	Autoclave	Commercial low temp epoxy tooling with 30% bio content
LTB310-1	Epoxy Carbon/Glass Tooling – 30% bio-based	4	45 – 70	40 – 4	Yes	201	230	No	Autoclave	Commercial low temp epoxy tooling with 30% bio content
LTC216-3	Epoxy Carbon/Glass Tooling	8	45 – 70	50 – 5	Yes	218	242	No	Autoclave	Aerospace low temp tooling
LTC410	Epoxy Long Outlife Tooling	21	65 – 80	16 – 4	Yes	192	218	Yes	Autoclave	Long outlife, toughened, low temp Aeropsace tooling
LTC400	Epoxy Long Outlife Tooling	30	65 – 80	20 – 6	Yes	207	228	No	Autoclave	Extra long outlife, low temp Aerospace tooling
OTS65	Epoxy Oven Cure Tooling	Up to 21	65 – 90	Consult Data Sheet	Yes	129	143	No	Oven	Out of Autoclave tooling & structures
BMI-1SC	BMI Tooling & Component	30	185	2	Yes	350	355	No	Autoclave	High temp, high durability Aerospace Tooling
ADHESIVE FILM										
MTFA500	Adhesive Film	30	80 – 120	16 – 1	No	141	150	Yes	Autoclave	General purpose film adhesive
VTFA400	Adhesive Film	21	65 – 120	16 – 1	No	135	147	Yes	Autoclave	General purpose film adhesive with versatile cure
MTFA400	Adhesive Film, High Temperature Service	30	80 – 150	16 – 1	Yes	170	190	Yes	Autoclave	General purpose, higher service temp
COMPONENT PREPREG — Low to Medium Temperature Cure										
LTC250-2XL	Low Temp Cure	5	50 – 75	40 – 4	Yes	130	144	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	80 – 120	16 – 1	No	131	148	Yes	Autoclave	General purpose system also with excellent optical clarity for cosmetic carbon parts. Low viscosity version available
MTE500	Next Generation Multi-Purpose Component System	60	120	1	No	140	155	Yes	Autoclave	General purpose system with optimised handling characteristics for the production of the highest quality visual parts
MTC275	Med Temp Cure, Out of Autoclave	30	80 – 120	16 – 1	No	121	135	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	80 – 120	16 – 1	Yes	190	206	Yes	Autoclave	Higher service temp system with good visual finish
MTC811	Med Temp Cure, Core Bondable	60	90 – 120	14 – 1	No	121	128	Yes	Autoclave	Highly toughened system for structures requiring good damage tolerance and impact performance
MTC400	Med Temp Cure, High Temp Structural	30	80 – 135	16 – 1	Yes	227	238	Yes	Autoclave	High service temp (typically up to 180°C) components in Motorsport, Automotive and Aerospace. 160°C wet Tg
MTC400-1	Med Temp Cure, High Temp Structural	30	80 – 135	16 – 1	Yes	207	224	Yes	Autoclave/ Oven/Press	Higher service temp (typically up to 150°C) structural components in Automotive and Motorsport
MTC412	Med Temp Cure, High Temp Service OOA	30	80 – 150	16 – 1	Yes	170	190	Yes	Autoclave/Oven	High service temp and Out of Autoclave processing typically for Aerospace applications
MTB350	Med Temp Cure – 30% Bio-based	6 months	80 – 140	16 – 15 mins	Yes	171	190	Yes	Autoclave	Multi-purpose 30% bio content system with exceptional outlife. For use with all fibre types, including flax
COMPONENT PREPREG — Versatile Temperature Cure										
VTC401	General Purpose, Fast Cure Component Core Bondable	21	65 – 140	16 – 15 mins	No	130	139	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	65 – 140	16 – 15 mins	Yes	190	206	Yes	Autoclave/ Oven/Press	Versatile system. Low temp cure for lower cost, larger structure with increased service temperature
VTC212	Surfacing System, Out of Autoclave	21	65 – 120	16 – 1	Yes	135	140	Yes	Oven	Versatile system with good Out of Autoclave processing for high quality surface finishes
OPS75	Oven Panel System	Up to 21	65 – 130	Consult Data Sheet	No	140	160	Yes	Autoclave/Oven	Automotive body panels with excellent retained surface finish once environmentally cycled
APS75	Autoclave Panel System	21	65 – 130	Consult Data Sheet	Yes	170	191	Yes	Autoclave	Automotive body panels with higher service temp
COMPONENT PREPREG — High Service Temperature										
HTC400	High Temp Cure, High Service Temp	30	180	2	No	263	272	Yes	Autoclave	High service temp Automotive and Aerospace structures
CEM100	Cyanate Ester, Very High Service Temp	21	120 – 135	3 – 2	Yes	345	400	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	120 – 135	3 – 2	Yes	275	300	No	Autoclave	High service temp Automotive and Space components with low-outgassing requirements
COMPONENT PREPREG — Flame Retardant										
FRVC411	Flame Retardant, Core Bondable	21	65 – 140	16 – 15 mins	Yes	155	176	Yes	Autoclave/ Oven/Press	Flame retardant for Aerospace and Automotive structures
MTC510FRB	Flame Retardant, Med Temp Cure	30	80 – 120	16 – 1	No	130	148	Yes	Autoclave	General purpose flame retardant system
PS200	Flame Retardant, Bio-based	21	100 – 130	3 – 1	Consult SHD	280	330	No	Autoclave/Oven/ Press – Contact SHD	Bio-derived, highly flame retardant system for fire containment applications such as battery enclosures
FR308	Flame Retardant, Bio-based	21	100 – 130	3 – 1	Consult SHD	142	181**	No	Autoclave/Oven/ Press – Contact SHD	Bio-derived, highly flame retardant system for interior structures, typically to replace phenolic resins

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.

* 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.

** FR308 can potentially reach a Peak Tan θ Tg above 232°C after high temperature post-cure cycles.

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