

Elevated Temperature Curing Instructions and Recommendations

Elevated temperature curing can be used to shorten overall curing time (force curing) or to enhance material properties (post curing). **Force curing** refers to elevated temperature curing for a short period of time to reduce the cure time needed to achieve ambient cure material properties. Please refer to the respective product data sheet for force cure instructions. **Post curing** refers to elevated temperature curing for an extended period of time to achieve material properties greater than those that could be obtained from ambient curing. Post curing allows a composite to be used at higher wet service temperatures as described in the table below.

Wet Service Temperature for ARC Composites when Post Cured

Product	Cure Temperature and Time				
	25°C(77°F)*	50°C (122°F) 24 hrs.	70°C(158°F) 18 hrs.	95°C (203°F) 12 hrs.	120°C (248°F) 12 hrs
ARCS1PW	52°C(125°F)	65°C(149°F)	75°C(167°F)	75°C(167°F)	80°C(176°F)
ARC S2	52°C(125°F)	65°C(149°F)	75°C(167°F)	75°C(167°F)	85°C(185°F)
ARC S4+	60°C(140°F)	70°C(158°F)	80°C(176°F)	90°C(194°F)	95°C(203°F)
ARCSD4i	65°C(149°F)	70°C(158°F)	75°C(167°F)	75°C(167°F)	85°C(185°F)
ARC 855	65°C(149°F)	70°C(158°F)	75°C(167°F)	75°C(167°F)	85°C(185°F)
ARC 858	70°C(158°F)	80°C(176°F)	95°C(203°F)	105°C(221°F)	110°C(230°F)

Note: Specific post cure temperatures and times for ARC HT-T , ARC HT-S and ARC S-5 are provided on their respective Application Instruction Sheets.

It is important the ARC Composite be allowed to reach the Tack Free cure stage before curing at elevated temperatures. The Tack Free cure stage should be confirmed by physical examination with a gloved finger or a cotton swab. The time limits of when post curing must begin have not been completely determined. Therefore, we recommend that post curing begin as soon as possible after Tack Free cure is reached.

When curing at elevated temperatures it is critical to confirm that the entire surface is maintained at the specified temperature for the specified time. Air flow and thermal currents can create hot spots and cold spots within a large heated area. Control over the curing conditions becomes more difficult as the surface area and temperature increase.

The recommendations listed above are based on the best information available. We continue to study the curing characteristics of ARC Composites and will update this technical bulletin as new information becomes available.

* See Application Instruction Sheet for cure time at ambient temperature.

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