

Maximizing Productivity with Arjay Fairing: Knowing the Differences in Catalysts and Cure Times

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A question we are often asked is whether our fairing compound can be used with benzoyl peroxide (BPO) instead of the more common methyl ethyl ketone peroxide (MEKP). The short answer is “Yes”, but there is more to the story than that.

Fig. 1

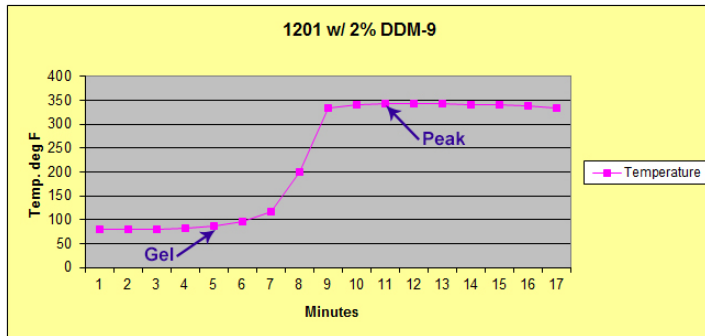
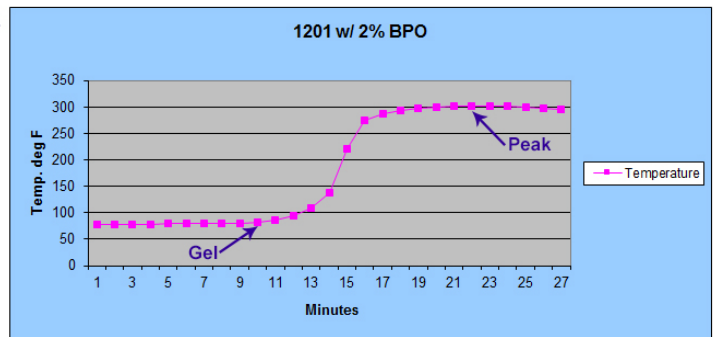


Figure 1 is a time/temperature curve of a 100 gram mass of Arjay’s 1201 fairing compound initiated with 2% DDM-9. The working time is about five minutes until the material begins to gel. Then there is a very steep rise in the temperature leading to a peak exotherm of 344° F. This rapid rise during the “gel to peak” interval (6 minutes) is key to being able to start sanding as soon as possible. Typically, in an hour sanding can begin that will result in a perfect feather edge.

But what happens when BPO is used? Figure 2 shows the time/temperature curve for the same product initiated with 2% BPO. The working time in this case is about ten minutes or approximately double that when MEKP is used. This in itself could be an advantage since presumably more fairing compound could be spread during this extra time resulting in fewer mixing steps. The gel to peak is not as steep as with MEKP, taking 16 minutes to reach 302° F. Because of this “flatter” curve, the cure time is going to be extended compared to MEKP initiated material. The good news is that, even though longer with BPO, the waiting time before sanding can begin is still only about two hours.

Fig. 2



Most times more than one fairing application is necessary to achieve the level of cosmetic quality demanded in today’s marketplace. Working with a material that can be sanded in either one or two hours is a significant advantage resulting in the possibility of multiple applications in an eight hour day. Customers have reported being able to meet challenging deadlines because of this.

Whether BPO or MEKP is the better choice is going to depend on a number of factors:

- Complexity of the part
- Time frame of the project
- One man or help available
- Number of applications expected

It is said that knowledge is power. Knowing that Arjay’s fairing compounds work with either BPO or MEKP and knowing the differences between them hopefully will give you one more tool in your toolbox to address the challenges of your next project.