

Curing information for Polyramic® SPR-212



POLYMER-TO-CERAMIC™ TECHNOLOGY

Curing Polyramic® SPR-212 to a Thermoset State

Polyramic® SPR-212 is a liquid precursor to thermally stable silicon oxycarbide ceramics. SPR-212 has methyl, vinyl and Si-H functionality and, as such, can be cured to a thermoset state using organic peroxide initiators or platinum catalysts. Figure 1 shows DSC traces for SPR-212 with various amounts of platinum catalyst. Figure 2 shows DSC traces for SPR-212 with various amounts of dicumyl peroxide. Traces for SPR-212 without catalyst or initiator are also shown for reference. Other platinum catalysts, organic peroxides and free radical initiators suitable for silicones with similar functionalities may also be used.

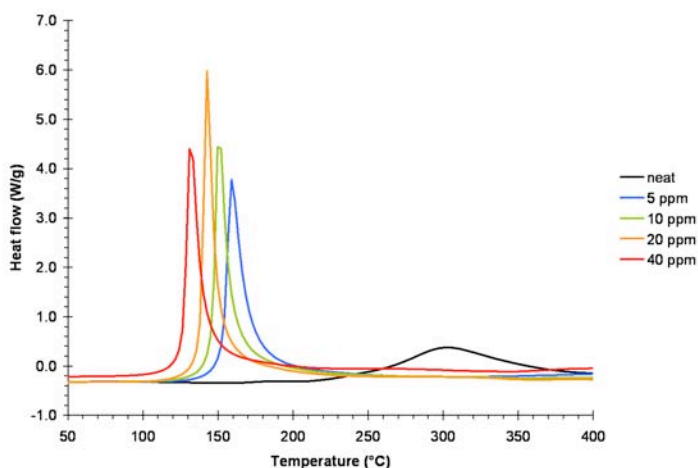


Figure 1: DSC traces for SPR-212 with 5, 10, 20 and 40 ppm platinum catalyst.

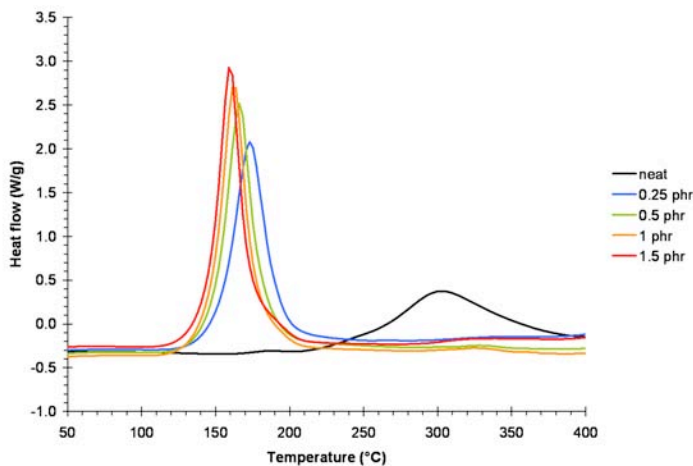


Figure 2: DSC traces for SPR-212 with 0.25, 0.5, 1 and 1.5 phr dicumyl peroxide as an initiator.

¹ Platinum catalyst is CAT-776, available from Starfire Systems, Inc.

² Dicumyl peroxide was added as a 50 wt% solution in toluene.

Warranty

No analysis of this product is permitted. The data provided relates only to the material identified above, as supplied by Starfire Systems®, Inc. (SSI). Because conditions and methods of use of our products are beyond our control, this information should not be used as a substitution for customer's tests to ensure that SSI's products are safe, effective, and fully satisfactory for the intended end use. SSI's sole warranty is that the product will meet sales specifications in effect at the time of shipment.