



Better Materials for Harsh Environments™

THE USE OF EEMS CROSSLINKING CATALYSTS FOR CURING PRE-CERAMIC POLYMERS (PCP)

EEMS crosslinking catalysts are uniquely formulated with non-flammable carriers and optimized to be used to cure most pre-ceramic and inorganic polymers. Selected CLC catalysts will crosslink siloxanes, silazanes, and carbosilanes at relatively low temperatures with little or no foaming. **Please contact EEMS, LLC for advice on Cure and Pyrolysis Parameters that will be suitable for your intended application.**

There are three basic catalyst systems and some blends available from EEMS:

- Platinum based (CLC- PLxxx series) - primarily for hydride and vinyl curing, can also be used with allyl substituted polymers such as polycarbosilanes
- Peroxide based (CLC- POyyy series) – primarily for vinyl, allyl, and propargyl curing
- Metal based (CLC- MLxx series) – primarily for silanol and hydride curing

CLC-PLxxx Series

There are currently four members of the PL catalyst family. Depending on the type of polymer, the cure temperatures range from room temperature to 150°C. The CLC-PL series can be used for vinyl and hydride containing polysiloxanes as well as allyl and hydride containing polycarbosilanes such as AHPCS.

CLC-POyyy Series

The CLC-PO series of initiator/catalysts are based on a blend of peroxides in a non-flammable carrier designed to produce lower exotherm cures when used with vinyl/hydride, allyl, or propargyl substituted polymers. These catalysts will promote curing in the 140-180°C temperature range with somewhat higher toughness, and lower modulus than a platinum cured resin.

The CLC-PXO series of catalysts can be used to crosslink vinyl and hydride containing polysiloxanes, polysilazanes, and allyl, hydride, or propargyl substituted polycarbosilanes.

CLC-MLxxx Series

The CLC-MLxxx family of catalysts are metallorganic/amine catalyst systems in a non-flammable carrier designed for hydride and Silanol substituted polymers. Unlike the other types of catalysts, these

catalysts promote the generation of water during curing. The CLC-ML catalysts can be used to crosslink "OH" and silicon hydride containing polysiloxanes, polycarbosilanes, and polysilazanes.

Please contact EEMS, LLC for advice on Cure and Pyrolysis Parameters that will be suitable for your intended application.

Warranty:

The data provided relates only to the product noted above. The information is correct to the best of our knowledge, EEMS™, Inc. does not guarantee any properties. Because conditions and methods of use of our products are beyond our control, this information should not be used as a substitution for users own tests to ensure that EEMS products are safe, effective, and fully satisfactory for the intended end use. EEMS's sole warranty is that the product will meet sales specifications in effect at the time of shipment.

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