

## Staking Lumped Low-Pass Band Filters With ECCOSTOCK® FPH

An innovative supplier of RF products, systems, services and educational solutions sought out engineers at Emerson & Cuming Microwave Products to take over a step in their production process.

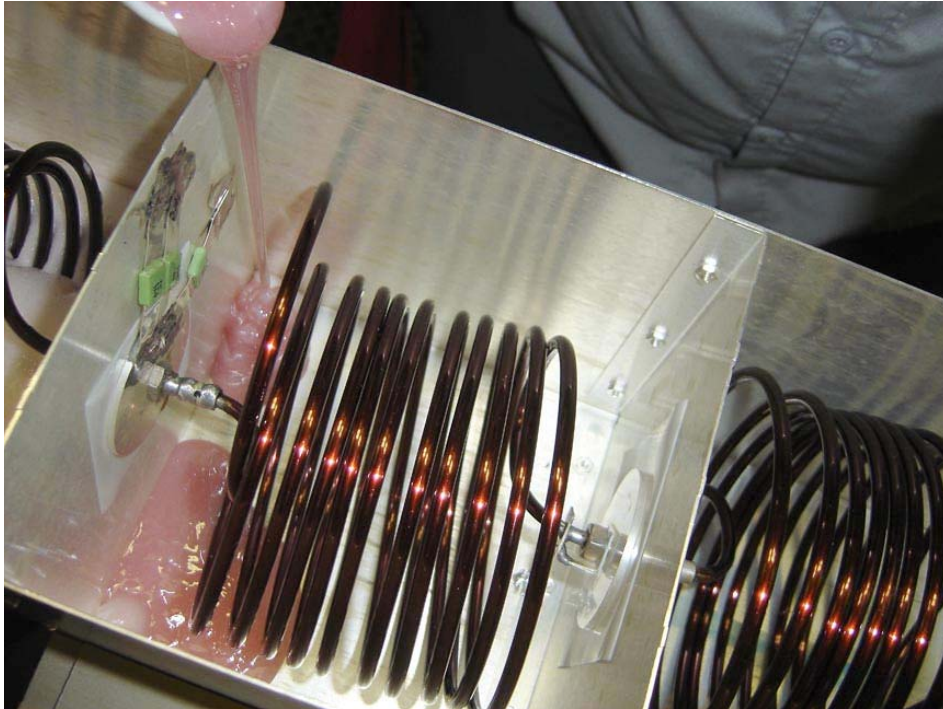
ECCOSTOCK® FPH/12-4H, a pink, high-temperature, low dielectric constant polyurethane foam was selected as a staking compound for use in lumped low-pass band filters capable of 5000W of radio frequency RF power. The equipment below, which has 6 isolated cavities roughly 8" square, was sent to the E&C Randolph, US facility where FPH was cast in place.



Predetermined amounts of both FPH and the Cat 12-4H were carefully weighed out and mixed in paper cups. Wooden tongue depressors are commonly used for mixing small amounts taking care to scrape the edges of the cup as well as the depressor to thoroughly mix all of the material until foaming begins.



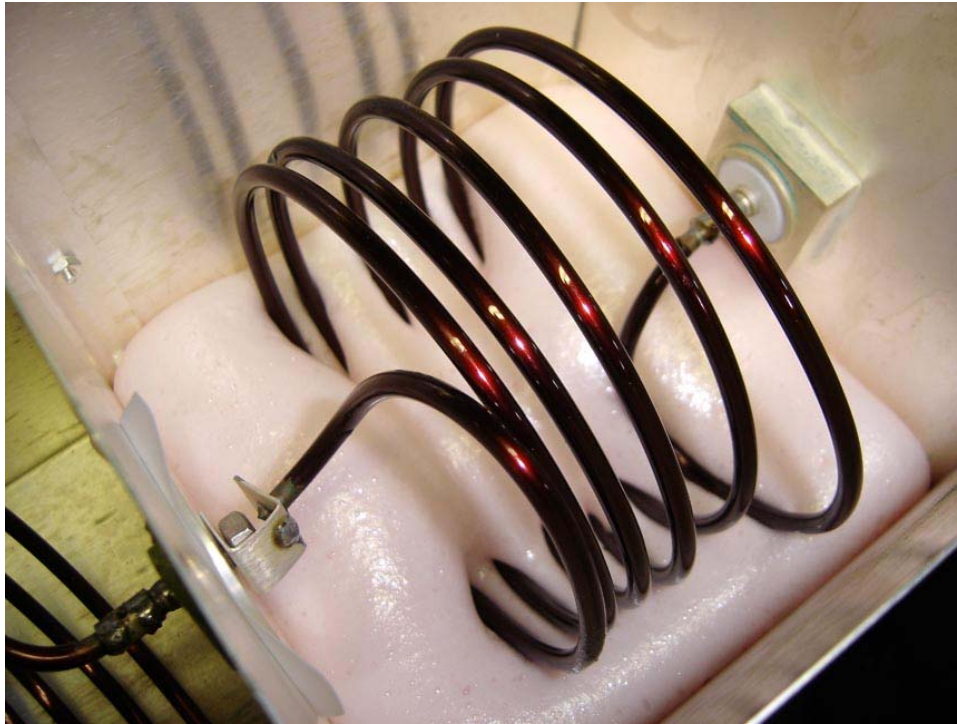
ECCOSTOCK® FPH/12-4H with its low viscosity is easy to mix and pour into these small cavities without spilling over onto the coils.



The ECCOSTOCK® FPH begins to slowly foam up around the coils.



Foaming continues until the reaction is complete offering a solid base for staking these coils in place. The filter now has excellent mechanical and thermal stability, but still allows tuning and adjustment in the final assembly steps.



Once completed these filters were shipped back to the customer for final assembly where they are an integral piece in a production set-up using high-power RF amplifiers.

