EP140FR in Gas Leak Detection system

2C Epoxy resin solves heat dissipation problem

The Customer

Customer is a developer of industrial Flame and Gas Detection Systems, designed to perform in the harshest environmental conditions and connects directly to an alarm or automatic fire extinguishing systems.

CHALLENGES

Customer product involves a highly engineered housing containing several UV/IR optical sensors identifying flames and hazardous gas. The challenge was to find a resin which is capable of evacuating the intense heat generated inside the product while performing under high thermal shock and in extreme environments.

SOLUTIONS

Polymer-G has modified and deployed its standard EP140 resin to meet all the thermal and electrical demanding requirements .

- **Customized development**
- **UL - 94-V-0 Standardized, FR incorporated**
- **High Temperature Resistant to 130 C**

BENEFITS

1. **Improved Thermal Management**

   Less heat was introduced into the power modules, resulted in extended lifespan of the electrical components compared with alternative epoxy resins

2. **Enhanced Void filling allowed waste reduction by 22%**

   The low to medium viscosity has enabled greater reach of the potting resin. That has also lead to better electrical insulation and mechanical protection of the active components

3. **Throughout has been increased by 45%**

   The variety of hardeners possibly fitted with the base compound offered flexible pot life combinations to match the customer production constraints. Due to the rapid curing of the chosen material, the output has been increased by 45%

The Numbers

85,000
products successfully manufactured with EP140FR / year

2.2 TONS
EP140FR dispensed with Polymer-G Smart Dispensing machine per year

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