CASE STUDY

Fast curing metal bonding solution for Ford Components

A quick and simple adhesive solution was required for one of Ford Components’ laminated metal shim pack products. Known as edgepeel®, the pack provides a number of shims, to specific customer requirements, that can be quickly and easily selected at the point of assembly, therefore speeding up production.

These thin steel shims are normally held together by their oil coating, but in a specialist application, a more robust solution was sought – and supplied by us in the form of Dymax Multi-Cure® 6-621, a UV curing spot lamp and a Fisnar adhesive dispenser.

The system, which is designed to provide excellent bonding onto metal with easy dispensing and fast UV/visible light cure, was tested on the oil coated laminate steel shims. It proved entirely successful by achieving a tiny bond line on the edge of the shims. This tiny bond line, combined with the presence of an oil coating, enabled just the right level of adhesion for the task at hand, therefore providing stable adhesion during storage/transit and clean separation when needed.

Explained Kevin Aldrich at Ford:

“We were delighted. INTERTRONICS came up with a quick simple system which fitted very easily into our production process with optimal results and at reasonable cost. Full marks all round!”

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Interestingly, the system worked by doing the opposite of best practice, which would normally seek to maximize the bond line and emphasize cleanliness in order to maximize adhesion. In this case, the use of a single part, quick cure, high performance adhesive at the margin of normal conditions overcame the presence of oil on a minimal bond area to provide exactly what was needed.

**Dymax BlueWave 75 UV curing spot lamp**

- Manual intensity adjustment
- > 9,000 mW/cm² initial intensity
- Simple to operate and adjust
- 2,000 hours useful life
- Integral shutter with digital timer
- Proprietary "Cool Blue" filter virtually eliminates liquid lightguide degradation
- Wide range of lightguides available (liquid/fiber, single/multi-pole, various lengths)
- Universal input voltage for global operation
- Fast bulb replacement

**Dymax Multi-Cure 6-621 UV light curing adhesive**

- Fast to ultra-fast cure speeds
- Production-proven technology
- Ideal for bonding applications
- Bonds to flexible and rigid substrates
- Co-optimised with Dymax UV curing equipment
- Fluorescing formulations to aid inspection
- Solvent-free
- RoHS compliant

**Applications include:** Secondary heat or activator cure; forms hard, clear bonds to multiple substrates including metals, glass, ceramic, polyamide (filled/unfilled), phenolic plastics