

UV Curing FIPG for Automotive Plastic Parts

Techsil were asked by an automotive company to provide a fast curing, liquid gasket sealant to be applied inside a groove on a plastic part on a production line.

Our Customer

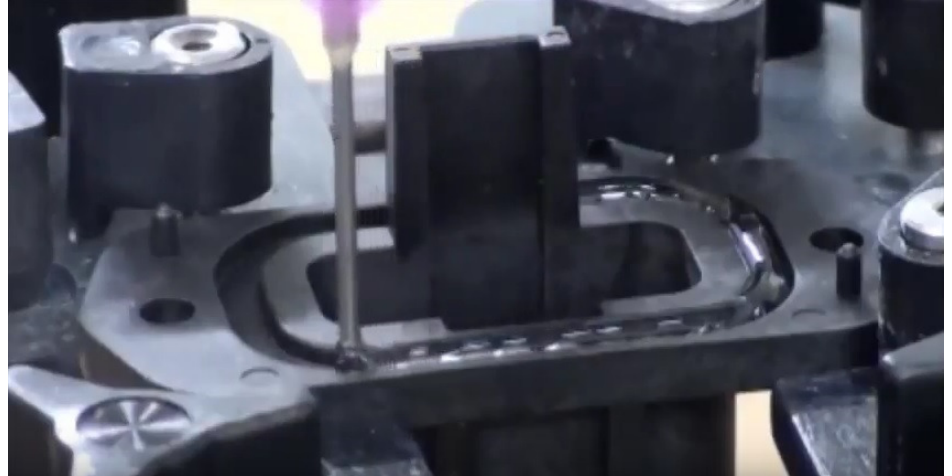
Automotive

Techsil Products Used

Vitralit® FIPG 60102

And

Hoenle UVACUBE 2000



Application

For this application, an instant cure was critical – the end solution was a FIPG (form in place gasket) with a very fast cure. The customer needed to be able to dispense a bead of material inside a groove along the circumference of the plastic part to form the gasket. As an added challenge, the gasket could not touch both walls simultaneously so that when compressed, the gasket would have room to expand inside the groove.

Solution

Techsil recommended Panacol's UV curing acrylic material Vitralit® FIPG 60102 alongside a UV curing chamber from Hoenle. VI 60102 is a gel material designed specifically for the automotive industry, thanks to its viscosity it can be dispensed exactly where you want it and then cured in seconds with a UV lamp or chamber.

The bead height for this application was 2.5mm above the bottom of the groove which was 2.00mm deep. The knit line was difficult to achieve but by speeding up the final line to 27mm/sec & lowering the z height the problem was overcome.

An air pressure regulating dispensing system and a 3 axis work cell were used. The parts were then placed in a UV-flood curing unit for 20 seconds at 100 mW/cm² UVA to cure the gasket in place successfully.

Customer Benefits

- Very fast cure
- Ability for precision application
- Bespoke technical guidance

Products Overview

Vitralit ® FIPG 60102 is a 30 Shore A solvent-free material. (A 20 Shore A version is also available, Vitralit ® FIPG 60101)

A typical UV-flood unit is the Hoenle UVACUBE 2000 curing chamber. Each machine is designed bespoke to dispense and cure to the customers' exact requirements.

Hoenle and its sister company Panacol are well known European innovators in UV technology and have worked with Techsil as authorised UK distributors for a number of years.

Their extensive product range spans from UV curing equipment and UV adhesives through conductive adhesives and structural adhesives.

Contact us for more information on our UV Curable Adhesive Solutions:

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