

Grand Perret

A dual-shaded defect

Paint peeling off from car control levers alerts the plastics engineer to the mixture used.

Alerted by one of its customers of a problem of paint peeling off on levers controlling the car seat, Grand Perret had to rapidly establish whether this problem was due to the paint or to the plastic injection system. Although specialized in plastic mould injection, the company, based in the Jura region, does not have the necessary equipment available to carry out this analysis. «We are not equipped to carry out laboratory tests and we were looking for a centre of expertise capable of working both on the paint and on the plastic material. The Cetim appeared to provide the solution» explains Guy Chappeland, Supplier Quality Manager at Grand Perret.

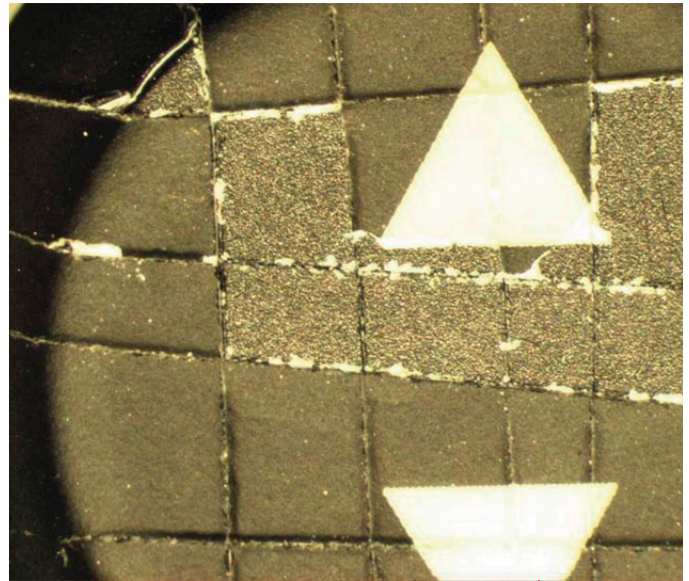
Analyze every aspect...

In order to establish the origin of the damage, the Cetim carried out several tests on the control levers in question, which are the size of a sugar cube (30 x 10 mm). Fourier Transform infrared spectroscopy (FT-IR) was used to perform a preliminary comparison between sound and damaged parts whilst

verifying the nature of the layers of the coatings. Simultaneously, the thickness of the different layers of paint was measured, searching for the potential presence of contaminants using a scanning electron microscope. Finally, different iated scanning colorimetry analyses and FTIR microspectrophotometry established whether the polymerization was complete and whether there was a possible mixing error in one of the bi-composite paints.

... a 3 cm³ sugar cube

Using this expertise, the Cetim concluded that there had been an error in the mixture base/hardener of the black polyurethane paint during its application. Consequence: bad cross-linking of the paint, causing it to repeatedly peel off. The report indicates that the paint does not always



OUR CUSTOMER

Company name:
Grand Perret

Headcount:
150 employees

Turnover:
E25M

Country:
France

Operational context:

Founded in 1875 and part of the Faiveley group since 1992, Grand Perret manages plastics projects from specifications through to the production phase. Certified ISO 9001 version 2000, this company works mainly in the automobile, automation, valves and fittings, electronics, sports and leisure sectors.

peel off at the level of the layer of imperfect paint, but sometimes on the most fragile part of the lever. «*In this case, the problem was finally solved quickly*» indicated Guy Chappeland, before adding: «*We will contact Cetim again for other problems concerning paint behaviour, that's for sure*».

Cetim's asset



The Cetim's knowledge of paint and its applications, surface treatments, and testing resources enable them to provide precise responses and corrective action plans for paint problems.