The Company
A multi-national company with a long track record in the supply of chemical agent resistant protective coatings to the international aerospace industry (OEM & Refurbishment).

The Problem
The company had an existing 2K solvent based pigmented polyurethane protective topcoat which was spray applied to military and civil aircraft. The coating had to be durable, provide good weathering properties and chemical resistance.

This system, based on HDI biuret (low viscosity) and polyester/ acrylic resin technology, exceeded the required VOC threshold. As a result, the company needed to convert to a VOC compliant coating system to satisfy environmental regulations whilst not compromising any of the existing performance properties.

The Solution
The development approach was to introduce a reactive diluent to enable the formulation of higher solids (lower VOC) polyurethane coatings.

Following an extensive screening process, Incozol LV was found to be the ideal technology.

The product was then incorporated into the formulation as a part replacement of the polyester soft segment to increase the solids content.

The Benefits
Incozol LV was developed to replace a portion of the polyol component enabling the formulation of high solids, low VOC coatings. In addition, it acts as a moisture scavenger preventing the generation of CO₂ gas which would lead to defects in the final film.

Incozol LV was found to have excellent compatibility with the HDI biuret and helped to maintain the application viscosity, chemical resistance and satisfy the VOC requirements.

Use of Incozol LV in the formulation helped provide the following advantages for the company's coatings:

- VOC compliance
- Excellent chemical resistance
- Excellent compatibility with both the polyols and isocyanates
- Further protection against potential moisture contamination
- Excellent application viscosity
- Maintains the integrity of the coating film without compromising performance