



# Ultracur3D® RG 35

## Rigid Reactive Urethane Photopolymer

Ultracur3D® RG (rigid product line) is a medium-viscous, highly reactive photopolymer for 3D printing applications resulting in rigid multipurpose parts. It can be used to produce high performance functional parts by using Stereolithography (SLA), Digital Light Processing (DLP) or Liquid Crystal Display (LCD) machines. Parts produced with this resin show no water uptake and excellent UV aging properties.

### Benefits at a Glance

- High accuracy
- No water uptake
- Low shrinkage
- UV aging
- Flame-retardant

### Example Applications

- Snapper
- Air duct
- Electrical socket
- Connectors
- Thermoforming mold
- Jigs and fixtures

### Material Properties: Ultracur3D RG 35

Tensile Strength	68 MPa
Flexural Modulus	2546 MPa
Elongation @ break	4 %
HDT @ 0.45	84 °C
E Modulus	2539 MPa

## Project reference Snapper

### ■ Description of the project & challenge:

A major chemicals group's Adhesive Research specialists contacted the Forward AM team. The customer was currently using several adhesive tape strips to fix parts together. The problem is that this method required exhaustive preparation, did not deliver robust results, and the components sometimes fell apart. We developed Snap-Fit designs to do the same job faster, more reliably and requiring fewer manual steps.

### ■ Our solutions and added value for the customer:

We applied Virtual Engineering to understand the problem, developed a different, new and unique solution and optimized it through Numerical Free Shape Optimization. Changing the contour reduced surface stress by 24%, which delivered a major improvement in construction integrity.

