

Success with UV adhesive to make emergency services equipment more rugged

The Problem

A leading manufacturer of premium portable lighting was looking to make its safety torches more rugged – they are used by fire fighters, police officers and military troops in the field. Their engineers needed the torches to withstand rough handling and extreme conditions in the field, and to work in a wide range of environments, such as search-and-rescue or life-threatening situations. During product development of some new torches, they decided to fortify the lens and reflector housings by applying a sealant to bond the sub-assembly together.

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The Solution

Application engineers from [Dymax](#) worked closely with the customer's team to come up with an innovative solution. After examining and testing the customer's parts, [Dymax Multi-Cure® 621-T](#) was recommended to bond the glass lens to the reflector housing. The decision was made based on **Dymax 621-T's** ability to bond dissimilar materials, its fast cure, and excellent adhesion properties.

To bond the sub-assembly, the lens and reflector housing were placed into a small rotary system underneath a dispensing valve and **Dymax 621-T** was applied in a uniform bead into the bond line. Dymax application engineers suggested using a [Dymax 2000-EC Flood Lamp](#) to cure parts post-assembly, because it offered a large 8" x 8" curing area, as well as high-intensity curing in 5-30

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seconds. The parts were assembled and then exposed to UV/visible light under the Dymax flood lamp. Rapid curing allowed the bonded parts to swiftly move onto the next step in the manufacturing process with virtually no down/wait time.

The Results

The manufacturer was impressed with the technical expertise provided for a ruggedising adhesive. They were also very satisfied with [Dymax Multi-Cure 621-T](#) and with how the [Dymax 2000-EC Flood Lamp](#) enhanced their process by curing a large area in just a few seconds. This solution enabled faster processing, greater output, and lower processing costs.

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