

An Introduction to Glassbond LED Capping Adhesives

MICHAEL CORDELL, MANAGING DIRECTOR

HAYLEY MOORE, TECHNICAL SALES MANAGER

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Background

- Established in 1978 to manufacture lamp capping cements for the lighting industry
- Manufacturer of high temperature ceramic adhesives and moulding compounds for the lawn bowl industry
- For the last few years we have been supplying instant and UV adhesives
- 26 employees on site in St. Helens, UK
- Network of agents throughout Europe



Background

- ISO9001: 2015 and ISO14001:2015 registered
- Established and well trusted in the market
- Experienced global exporters
- Technical expertise in our areas of business
- Nimble and fast moving, able to adapt



Introduction

- A collection of UV-curable and high performance instant adhesives
- Proprietary formulations manufactured in the UK
- First generation commercialised in 2019
- Suitable for bonding glass, ceramic, metal and plastics in seconds
- Introduced originally for use in LED lamp manufacture where sensitive electronics are used
- Quickly discovered that both chemistries are applicable in a variety of other areas

UV-Curables

- Contains a blend of photoinitiators, polymers and resins
- Supplied in opaque packaging to prevent exposure to light
- Typical applications:
 - Signage
 - Automotive
 - PCBs
 - Dental
 - OLED displays
 - Fibre optics



UV-Curables

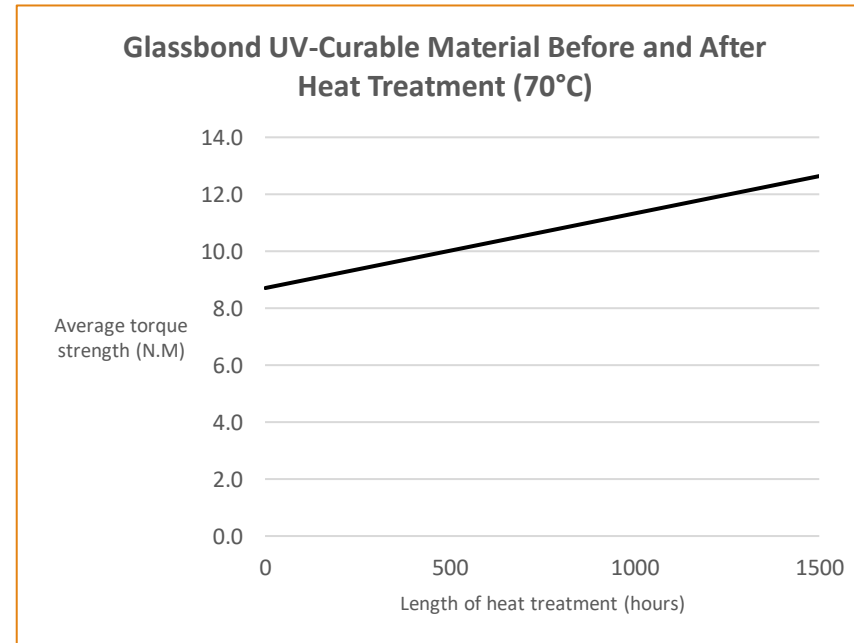
- Best suited to applications that use at least one transparent substrate such as glass or thermoplastics
- Can also be used for potting applications
- Three grades available:
 - L904, general purpose metal bonder
 - L930, thixotropic metal bonder
 - L931, thixotropic plastic bonder
- Easy to handle with an indefinite working time, cures on demand



Bonding glass to aluminium with L904

UV-Curables

- Thermal post-cure effect on tensile and torque strength – increases seen in warm environments
- Use a photochemical reaction to cure in seconds
- Suited to UV-A wavelengths at 395nm
- Invisible bond line, complete optical clarity



High Performance Instant Adhesives

- Based on organic polymers that use residual surface moisture to cure in seconds
- Suitable for a whole range of substrates
- Two grades available:
 - L822, general purpose with optimised cure speed
 - L829, general purpose with enhanced heat resistance
- Thin-film technology, very small quantities required to achieve high tensile strengths
- Highly malleable, formulations can be easily tailored to a customer's requirements



Bonding glass to polycarbonate with L822

High Performance Instant Adhesives

- Acidic stabilisers used in the gas and liquid phase to prolong shelf life
- Typical properties that can be altered include:
 - Viscosity
 - Colour
 - Cure speed
 - Thixotropy
 - Heat-resistance
 - Odour level
- 100% solids, no VOCs present
- Classed as non-hazardous, all grades can be transported globally without restrictions

Packaging

- Various packaging sizes available to meet every requirement

| High Performance Instant Adhesives | UV-Curables |
|------------------------------------|-----------------|
| 20g bottles | 50g bottles |
| 50g bottles | 100g bottles |
| 5Kg jerry cans | 5Kg jerry cans |
| 20Kg jerry cans | 20Kg jerry cans |

- Fully compatible with automated production lines for high speed manufacture
- Jerry cans are supplied with aeroflow taps to allow for easy dispensing

Contact Details

Michael Cordell

Managing Director

+44 (0)1744 730334 ext. 209

[LinkedIn](#)

michael.cordell@glassbond.co.uk

Hayley Moore

Technical Sales Manager

+44 (0)1744 730334 ext. 202

[LinkedIn](#)

hayley.moore@glassbond.co.uk

Company Social Media Pages

[LinkedIn](#) [Facebook](#)

[Twitter](#) [YouTube](#)