



# Scotch-Weld™ UV Curing Adhesive UV011

## Product Data Sheet

Updated : February 2010  
Supersedes: March 2007

**Product Description** Scotch-Weld UV011 is a single component, low viscosity adhesive that cures to give a clear, flexible bond when exposed to UV-light.

**Key Features** Scotch-Weld UV011 has been formulated to give very high strength bond between thermoplastics and metals. It is especially suited for medical device assembly. UV011 is specially suited for bonding stainless steel needles into plastic hubs.

### Properties

<b>Base</b>	Urethane acrylate adhesive
<b>Appearance</b>	Clear
<b>Specific Gravity</b>	1.04
<b>Viscosity cPs</b>	Range 80-110 Typical Value 90
<b>Fixture Time</b> (glass slide fixture 10mW/cm <sup>2</sup> @365nm)	<10secs
<b>Depth of Cure</b> (cured for 30s at 10mW/cm <sup>2</sup> @365nm)	2mm
<b>Compressive Shear Strength</b> (cured for 180s at 20mW/cm <sup>2</sup> @365nm)	2.5N/mm <sup>2</sup>
<b>Refractive index</b>	1.4770
<b>Hardness, Shore D</b>	77
<b>Temperature Range</b>	Continuous -50 to +120 °C Intermittent -50 to +150 °C

### Curing Mechanism

Scotch-Weld UV011 is formulated to cure when exposed to UV radiation of 365nm and above. The rate of cure, depth of cure and surface tack of the cured adhesive will depend on the intensity of the UV light, exposure time, spectral output of the UV light source and light transmittance of the substrates to be bonded. Depths of cure of up to 4mm can be achieved with high intensity lamps and long cure times. To achieve a fast, controlled, reproducible cure performance, the use of high quality UV lamps is recommended.

### Heat Ageing

Scotch-Weld UV-curing adhesives exhibit excellent resistance to heat ageing. Typically, exposure to heat for a prolonged period results in fully curing any uncured resin that may remain.

<b>Application Techniques</b>	Ensure parts are clean, dry and free from oil and grease. Apply adhesive to one surface, bring parts together and expose to UV light. Alternatively, parts can be assembled and the adhesive applied and allowed to wick around the joint before curing. Excessive adhesive can be wiped away with Scotch-Weld AC70 Safety Clean or alcohol
<b>Storage Conditions</b>	Keep the adhesive in a cool, dry place away from direct sunlight. Under such conditions shelf life at room temperature will be 12 months.  Refrigeration to 5°C gives optimum storage stability.
<b>Shelf Life</b>	12 months from date of despatch by 3M when stored in the original carton at 21°C
<b>Precautionary Information</b>	Refer to product label and material Safety Data Sheet for health and safety information before using the product. For information please contact your local 3M Office. <a href="http://www.3M.com">www.3M.com</a>
<b>For Additional Information</b>	To request additional information or to arrange for sales assistance, call 0870 6080050 Address correspondence to: 3M United Kingdom PLC, 3M House, 28 Great Jackson Street, Manchester, M15 4PA  For certifications held by this product please refer to the Technical Service Bulletin.
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