



# Scotch-Weld™ UV Curing Adhesive

## UV301

### Product Data Sheet

Updated : February 2010  
Supersedes: March 2007

**Product Description** Scotch-Weld UV301 is a single component, medium- low viscosity adhesive that cures to give a clear, flexible bond when exposed to UV-light.

**Key Features** Scotch-Weld UV301 has been formulated to provide very high strength bonds between rigid PVC and polycarbonate. The flexible nature of the bond increases the load-bearing and shock-absorbing characteristics of the joint. UV301 will also bond to most plastics and other substrates.

#### Properties

<b>Base</b>	Urethane acrylate adhesive
<b>Appearance</b>	Clear, almost colourless.
<b>Specific Gravity</b>	1.07
<b>Viscosity cPs</b>	Range 200-300 Typical Value 250
<b>Fixture Time</b> (glass slide fixture 10mW/cm <sup>2</sup> @365nm)	<5secs
<b>Depth of Cure</b> (cured for 30s at 10mW/cm <sup>2</sup> @365nm)	2mm
<b>Tensile Shear Strength</b> (ASTM D3163, 180secs cure @ 20mW/cm <sup>2</sup> @365nm)	PC/PC >4.5 N/mm <sup>2</sup> (substrate failure)
<b>Refractive index</b>	1.475
<b>Hardness, Shore D</b>	55
<b>Temperature Range</b>	Continuous -50 to +120°C Intermittent -50 to +150°C

#### Curing Mechanism

Scotch-Weld UV301 is formulated to cure when exposed to UV radiation of 310nm 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 8mm 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 prolonged period results in fully curing any uncured resin that may remain.

---

**Application Techniques** 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 RITE-LOK AC70 Safety Clean or alcohol

---

**Storage Conditions** 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.

---

**Shelf Life** 12 months from date of despatch by 3M when stored in the original carton at 21°C

---

**Precautionary Information** 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. [www.3M.com](http://www.3M.com)

---

**For Additional Information** 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

---

**Important Notice** All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law

---

Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations

---

3M and Scotch-Weld are trademarks of the 3M Company.

3M United Kingdom PLC  
3M House,  
28 Great Jackson Street,  
Manchester,  
M15 4PA

Product Information :  
Tel 0870 60 800 50  
Fax 0870 60 700 99

3M Ireland Limited  
The Iveagh Building  
The Park, Carrickmines  
Dublin 18,  
Ireland

Customer Service :  
Tel (01) 280 3555  
Fax (01) 280 3509