

### Description

PW1081 is a one-part, solvent free and UV light-curing adhesive. It is ideal for sealing, potting and plastic bonding where biocompatibility is required.

### Features

- Recommended substrates: ABS, PC, PETG, PMMA
- Can also be cured by visible light
- Transparent when cured
- Fluorescent under UVA light
- Soft and flexible when cured

### Uncured Properties

<b>Chemical Type</b>	Acrylate
<b>Appearance</b>	Transparent
<b>Viscosity @ 25°C [mPa·s]</b> Brookfield LVDV, spindle 14# @ 20rpm	3,000
<b>Specific Gravity [g/cm<sup>3</sup>]</b>	~1.05
<b>Shelf Life @ 2-8°C [months]</b>	6

### Curing Conditions

<b>Surface Curing [secs]</b> UVA 100mW/cm <sup>2</sup> @ 395 nm LED lamp	30
<b>Depth of Cure [mm]</b>	1

### Cured Properties

<b>Hardness [Shore D]</b> ASTM D2240	46
<b>Lap Shear Strength [MPa]</b> PC to PC PMMA to PMMA ASTM D1002	14 5

<b>Tensile strength [MPa]</b> ASTM D638	13
<b>Elongation at Break [%]</b> ASTM D638	34
<b>Biocompatibility</b> ISO 10993-5	Passed

### Directions for Use

#### 1. Surface Treatment

Surfaces to be bonded should be free of dust, oil, grease or any other contaminants in order to achieve a reproducible bond. Any contamination involving alkaline substances and amines is to be strictly avoided as these can impede curing. For slightly contaminated surfaces, it is sufficient to wipe with isopropanol or ethanol. Substrates with a low surface energy (e.g. polyethylene, polypropylene, Teflon) need to be pre-treated physically (e.g. atmospheric plasma or corona) in order to achieve sufficient adhesion.

#### 2. Application

Products are supplied ready for use. Depending on package type, they can be dosed manually, semi-automatically or fully-automatically with dosage a apparatus. With automatic dispensing using a cartridge, the adhesive is conveyed via pressure and a piston rod to a dispense valve. For bottles, the adhesive is conveyed using a pump.

A variety of valves are available to adjust for the desired dosing accuracy and speed. Please consult our Application Engineering department

recommendations on the dosage amount to be used for your application.

UV light source with a spectrum of 320 to 500 nm is recommended. It can also be cured with LED sources of 385 - 405 nm wavelength.

After application, it is recommended that the two substrates be adjoined immediately as it is possible the curing process will begin with select products under ambient conditions.

3. Suggested working temperature range is -40 to 80°C.

### Storage

Maximum shelf life may be obtained when product is stored in a cool, dry location at a temperature between **2°C to 8°C**. TO PREVENT CONTAMINATION OF UNUSED PRODUCT, DO NOT RETURN ANY PRODUCT TO ITS ORIGINAL CONTAINER.

### Materials Handling

Refer to the Material Safety Data Sheet (MSDS) for this product.

### Disclaimer

*The information provided here including the recommendations for use and application of the product is based on internal laboratory test conditions and should only be used as a reference. CollTech does not assume responsibility for the test or performance results obtained by the user. It is the responsibility of the user to perform their own evaluations to confirm whether this product is suitable for their application.*