

Description

PW 1442 is a one-part UV curing adhesive. It is ideal for applications including bonding (e.g. battery cells), sealing and potting of plastics, metals, and other substrates.

Features

- Recommended substrates: PC, PMMA, ABS, Stainless Steel
- Good flexibility
- Provide good mechanical shock resistance

Uncured Properties

Chemical Type	Modified Acrylate
Appearance	Milky
Viscosity @ 25°C [mPa·s] Brookfield LVDV, spindle 14# @ 20rpm	14,000
Specific Gravity [g/cm³]	~1.1
Shelf Life @ 10-28°C [months]	6

Curing Conditions

Surface Curing [secs] UVA, 100mW/cm ²	25
Depth of Cure [mm]	3

Cured Properties

Hardness [Shore D] ASTM D2240	60
Lap Shear Strength [MPa] PMMA to PMMA PC to stainless steel PC to ABS ASTM D1002	7* 8 8*

Tensile Strength [MPa] ASTM D638	14
Elongation at Break [%] ASTM D638	120
Surface Resistivity [ohm·cm] ASTM D257	>1.0x10 ¹³
Volume Resistivity [ohm·cm] ASTM D257	>1.0x10 ¹³
Dielectric Strength [V/mil] ASTM D149	300

* substrates failure

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

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 130°C.

Storage

Maximum shelf life may be obtained when product is stored in a cool, dry location at a temperature between **10°C to 28°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.