



# Tru-Bond™ DC 1000

## UV/Visible Light Cure Adhesive

Technical Data Sheet  
Rev02, Oct 2014

## Dual Cure (DC)

### PRODUCT DESCRIPTION

The Tru-Bond™ Dual Cure (DC) series of products can be used with UV/Visible Light and/or a heat cure. These rapid curing products are designed for multiple applications including protective coatings, potting and tamper proofing. This provides a hard scratch resistant surface for decals, tags and emblems. This unique product can cure tack free under standard low intensity black lights without experiencing oxygen inhibition.

### PRODUCT CHARACTERISTICS

Chemical Class	Hybrid Acrylate
Appearance(uncured)	Clear Liquid
Components	Single-Requires no Mixing
Viscosity	Low

### TYPICAL PROPERTIES OF UNCURED MATERIALS

Specific gravity@25 °C	1.17
Viscosity@25 °C, Brookfield RV Spindle 3, 6 rpm, cP	1,000
Non-Volatile Materials, %	>99
VOC, %	<1
Flashpoint, °F(°C)	>212(100)
Shelf life, months	24
Solubility	ketones, oxygenated solvents

### TYPICAL PROPERTIES OF CURED MATERIALS

Color.	Clear
Refractive Index	1.55
Optical Clarity, %	>98
Tensile strength, ASTM D882,psi(MPa)	1028(7.09)
Elongation, ASTM D882,%	7.4
Modulus of Elasticity, ASTM D882, psi(MPa)	19,212(132.50)
Volume Shrinkage, %	5.65
Lineal Shrinkage, %	1.8
Water absorption, ASTM D570 (24 hrs.), %	1.1
Boiling Water, ASTM D570 (2 hrs.), %	4.5
Shore hardness	78D
Temperature range, °F(°C)	-65(-54) to 300(149)

This product can be cured in combination with UV/Visible light or with heat alone.

Heat Cure@300°F (149 °C), min 15

### Fixture Time and Tack-free Time:

Light Source	Irradiance (mW/cm <sup>2</sup> )	Fixture Time (Sec.)	Tack free Time (Sec.)
CT 100	20	< 1	< 4
Fusion ® D bulb	1,000	< 1	< 2
Uvitron PortaRay 400R	250	< 2	< 2

### Depth of Cure):

Light Source	Irradiance (mW/cm <sup>2</sup> )	Exposure Time 30 Sec. Inch (mm)
400 W Metal Halide Bulb	20	0.158 in(4mm)

### PROCESSING

ITW products are easily applied by syringe dispense or specialty valve spray units. The materials cure extremely fast in bondlines, e.g. where the surfaces are not exposed to air, with UV or Visible radiation. Exposure doses range from .5 - 2 J/cm<sup>2</sup> depending on the intensity of the lamps and configuration of the assembly.

### PRECAUTIONS

Please refer to the appropriate material safety data sheet (MSDS) prior to using this product.





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REV01, Jun 2014

### STORAGE

Store the unopened product in a cool, dry, well ventilated location away from sources of heat. Optimal storage temperatures should range between **10 °C (50 °F) and 32 °C (90 °F)**. **Do not expose the product to light.** It may polymerize upon prolonged exposure to ambient or artificial light. Product removed from the containers during use should not be returned to original containers in order to avoid potential contamination.

### CONVERSIONS

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} / 25.4 = \text{inches}$   
 $\mu\text{m} / 25.4 = \text{mil}$   
 $\text{N} \times 0.225 = \text{lb.}$   
 $\text{N/mm} \times 5.71 = \text{lb./in}$   
 $\text{N/mm}^2 \times 145 = \text{psi}$   
 $\text{MPa} \times 145 = \text{psi}$   
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$   
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$   
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$   
 $\text{mPa}\cdot\text{s} = \text{cP}$

### WARRANTY

ITW will replace any material found to be defective. Because the storage, handling and application of this material are beyond our control, we can accept no liability for the results obtained.

### NOTE

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