ThreeBond

Three Bond International, Inc.
Technical Data Sheet

TB3015B – UV Curable Adhesive / Sealant

Application

The TB3015B is a deep UV curable adhesive designed to have good adhesion to polycarbonate and good vacuum sealing properties.

The performance features of the 3015B include:

- Single Component System
- Dispensable Liquid
- Good Bonding to Plastic
- Deep UV Curing System
- Fast Curing, non-Yellowing, Clear Color
- Non-Solvent Based System

1.Typical Uncured Properties

Property	Test Method	Units	Value
Base Resin	-	-	Modified Urethane Acrylic
Appearance	3TS-201-01	-	Clear Liquid
Viscosity (@25°C)	3TS-210-02	mPa · s{cP}	4720 {4720}
Specific Gravity	3TS-213-02	-	1.04
Thixotropic Index	-	-	1.0

2. Typical Cured Properties

Property	Test Method	Units	Value
Cure Dose (Fusion D)	3TS-533-01	mJ/cm^2	2000
Cure Dose (Efos Novacure)	3TS-533-01	mJ/cm^2	4500 (1 sec @ 4500 mW/cm^2)
Shrinkage	-	%	2.8
Depth of Cure (@2000mJ/cm^2)	Modified 3TS-363	mm	>20
T_g	3TS-501-04	-	<RT
Hardness	3TS-387	Shore A	33±3
Tensile Strength	3BI-RD001	kgf/cm^2	4.7
Percent Elongation	3BI-RD001	%	67.1
Tan Modulus	3BI-RD001	MPa	1.11

These are typical results not product specifications.

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General Use Application Instructions for Adhesive

A) Clean the surface of parts to be bonded. This surface should be free of water, oil and other contaminates.
B) Apply the specific amount of sealant for the application without air bubble.
C) Please use appropriate worker safety equipment to shield against stray UV light damage to skin or eyes.

Application Notes

1) If resin is to be stored in separate container, store in a clean container made of opaque, UV blocking polyethylene or polypropylene plastic (metal or glass containers are not recommended). Transfer work should be carried out in shaded, non-direct light exposure areas, with UV filtered, light if possible. Once resin is transferred to another container, the transferred material should not be returned to the original container. Keep storage container closed when not in use.

2) The resin can start the polymerization process when exposed to UV radiation in wavelength UV-A/B region of the spectrum. Typically, an UV source using a high pressure mercury or mercury metal halide bulb will produce a suitable UV spectrum for good UV curing. The power output for a suitable UV cure unit should be adequate to affect UV curing in a reasonable time frame (usually <10 seconds). The radiated power of the UV source should be of the order 1,000 mW/cm^2 to 4500 mW/cm^2 for the UV-A/B region. Curing speed results can be dependent on the spatial arrangement of the part and the UV source. UV power intensity (i.e. mW/cm^2) and UV dose (i.e. mJ/cm^2) measurements vary greatly depending on the distance between part and UV source. Please use UV radiometer to check UV dose for all cure conditions. The 30N-051 will respond correctly when exposed prescribed UV dose listed for this product, plus / minus window of typically 250mJ/cm^2. Please refer to UV dose listed on the front page of this Technical Data Sheet for this product.

Storing Instruction.

Resin should be stored, sealed lid closed in the original container at room temperature conditions. Do NOT freeze samples. Samples will be very stable if the above listed storage conditions are followed.

Disclaimer

Information included in this technical data sheet is typical results when the UV sealant is used according to its use instructions. Product properties should be confirmed in lab and from actual trial run results.

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