



# Technical Data Sheet

Light-Curable Adhesives, Sealants, and Masks

# Product VBB1

## Flexible, UV curable adhesive for high strength bonding of glass and plastics.

**Tangent Product VBB1** is a solvent-free, UV/Visible light curable adhesive that forms resilient, high peel strength bonds between glass, steel, aluminum, stainless steel, and many plastics including acrylic. Product VBB1 is a self-leveling, flowing liquid that is easily dispensed. Bonds prepared using Product VBB1 are optically clear and highly resistant to moisture and yellowing. The low durometer and flexibility of Product VBB1 makes it suitable for applications that involve environmental thermal cycling. Product VBB1 is most optimally cured using a full spectrum UV curing lamp, (320-460nm wavelength). This product may also be cured using a LED curing systems producing output wavelength of 365nm or 405nm.

### UNCURED PROPERTIES

COMPOSITION	Urethane Acrylate / Monomer Blend
VISCOSITY	800 – 1,500 cP [Brookfield 25° C., 30 RPM]
APPEARANCE	Transparent liquid with a slight yellowish tint
SPECIFIC GRAVITY	1.1 - 1.3 at 25° C.
FLASH POINT	200° F.
TOXICITY	Refer to Material Safety Data Sheet
SHELF LIFE	One year

### CURED PROPERTIES

SHORE HARDNESS, DUROMETER	Shore D 25 – 35
WATER ABSORPTION, % 24 hour immersion at 25° C	Less than 1%
TEMPERATURE RANGE	-40° C to + 140° C
REFRACTIVE INDEX	1.490 at 25° C

**THE VALUES NOTED IN THIS TECHNICAL DATA SHEET ARE TYPICAL PROPERTIES.  
THEY ARE NOT INTENDED TO BE USED AS PRODUCT SPECIFICATIONS.**

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**CURE DATA / GUIDELINES** [Glass substrates, 0.002-0.004 inch (0.050-0.100mm) bond gap, time in seconds]

Honle Bluepoint LED	Spot Curing System, 405 nm,	2000 mW/cm <sup>2</sup>	2-4 seconds
Honle Spot 100 LED	Flood Curing System, 405 nm,	250 mW/cm <sup>2</sup>	5-8 seconds
Honle Bluepoint 4	Spot Curing System, 320-420 nm,	2000 mW/cm <sup>2</sup>	2-4 seconds

Note: Actual cure rate in a production environment is dependent upon light source intensity, bond line distance from the light source, bond line gap or required depth of cure, and percentage of light transmission through the substrate covering the bond line. Please consult with Tangent Applications Engineering for assistance with curing equipment selection and process optimization.

**PACKAGING OPTIONS** - Standard packaging for this product includes 10 and 30 gram syringes, 300 gram cartridges, one kilogram bottles, and 17 kilogram pails. Other packaging options may be available upon request.

**STORAGE – This is light sensitive material. Containers must remain covered when not in use.**

Minimize exposure of uncured material to daylight, artificial light, and UV light during storage and handling. Store uncured product in its original, closed container in a dry location. Unless otherwise indicated on the product label, optimal storage temperatures are 10 to 30°C, (50 to 86°F). Any material removed from the original container must not be returned to the container as it could be contaminated. Tangent Industries cannot assume responsibility for products that were improperly stored, contaminated, or repackaged into other containers.

**HANDLING AND CLEAN-UP –** For safe handling information, consult this product's **Material Safety Data Sheet (MSDS)** prior to use. Uncured material may be wiped away from surfaces with organic solvents. Do not use solvents to remove material from eyes or skin!

**USING THE PRODUCT –** Prior to dispensing, ensure that each surface coming in contact with this product is clean and free of grease, mold release, or other contaminants. Dispense directly from the package, or utilize appropriate dispensing equipment that is compatible with light-curable adhesives and coatings. Fluid lines and dispense tips must be 100% light blocking. Curing stations should be equipped with air exhaust systems to evacuate vapors and heat generated during the curing process. After curing, this product must be allowed to cool to ambient temperature before testing the product's performance.

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