



# Technical Data Sheet

Light-Curable Adhesives, Sealants, and Masks

## Product 77200-VT

**Moisture resistant, UV curable adhesive for bonding plastics and dissimilar substrates.**

**Tangent Product 77200-VT** is a UV/Visible light curable adhesive / sealant that bonds to plastics including polyester, PVC and polycarbonate, as well as dissimilar materials such as aluminum, steel, ceramic, and glass. This product will dispense easily and demonstrate minimal migration on a surface. Product 77200-VT cures rapidly with broad spectrum UV lamps, (320-420nm) and monochromatic LED light sources. LED output of 365nm or 405nm is recommended for curing this adhesive. Bonds made with 77200-VT demonstrate high flexibility and exceptional peel strength. Product 77200-VT resists salt spray and the stresses of thermal cycling. Suggested uses include the structural bonding of components, potting, and other sealing applications.

### UNCURED PROPERTIES

COMPOSITION	Urethane Acrylate / Monomer Blend
VISCOSITY	9000 - 20,000 cP at 25°C. [Brookfield 25° C., 30 RPM]
APPEARANCE	Slightly amber colored liquid
SPECIFIC GRAVITY	1.1 - 1.2 at 25°C.
FLASH POINT	93° C
TOXICITY	Refer to Material Safety Data Sheet
SHELF LIFE	One year

### CURED PROPERTIES

SHORE HARDNESS, DUROMETER	Shore A 60 – 80
WATER ABSORPTION, % 24 hour immersion at 25° C	2 %
TEMPERATURE RANGE	-40° C. to 130° C.
REFRACTIVE INDEX	1.504 at 24° C.
T <sub>g</sub> (DSC)	-20° C. to -10° C.
THERMAL CONDUCTIVITY	0.45 W/mK
DIELECTRIC STRENGTH	9.5 kV/mm

**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>	1 second
Honle Spot 100 LED	Flood Curing System, 405 nm,	250 mW/cm <sup>2</sup>	2-4 seconds
Honle Bluepoint 4	Spot Curing System, 320-450 nm,	2000 mW/cm <sup>2</sup>	1 second

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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