



Technical Data Sheet

Light-Curable Adhesives, Sealants, and Masks

Product 90084

Solvent-free, UV curable Conformal Coating with exceptional wetting on Printed Circuit Boards.

Tangent Product 90084 is a UV light curable coating developed for use as a conformal coating in PCB assembly. When exposed to UV light of suitable intensity, Product 90084 will cure quickly into a hard, clear, resilient, and tack-free barrier. It is resistant to moisture, thermal shock, and abrasion. Product 90084 is a low viscosity liquid that can be applied using industry-standard dispensing systems and robotics. It is well suited for high volume production that incorporates precision spray deposition and conveying platforms with high intensity UV curing lamps. The exceptional wetting properties of Product 90084 help to create a coating with very uniform thickness. Product 90084 cures very rapidly with broad spectrum UV and visible light, 320-450 nm. Product 90084 may be cured in areas shadowed from UV light by using heat. This product contains a very bright fluorescing additive to permit inspection of coverage using automated vision systems.

UNCURED PROPERTIES

COMPOSITION	Urethane Acrylate / Monomer Blend
VISCOSITY	100-200 cps. at 25° C.
APPEARANCE	Clear liquid with yellow tint.
SPECIFIC GRAVITY	1.1 -1.2 at 25° C.
FLASH POINT	200° F.
TOXICITY	Refer to Material Safety Data Sheet
SHELF LIFE	One year

CURED PROPERTIES

SHORE HARDNESS, DUROMETER	D 80-85
WATER ABSORPTION, % 24 hour immersion at 22° C	< 1%
TEMPERATURE RANGE	-45° C – 145° C
FLUORESCING	High intensity blue color when exposed to UV light

**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

UV Curing: Glass substrates, 0.002-0.004 inch (0.050-0.100mm) bond gap, time in seconds

Honle Bluepoint 4, Spot Curing System	320-450 nm, 2000 mW/cm ²	1 second
Honle UVAPRINT, Flood Curing System	320-450 nm, 250 mW/cm ²	20-25 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.

Heat Curing: (UV curing should always be performed before a secondary heat cure)

Typical schedule -	<u>Temperature</u>	<u>Time</u>
	110°C (230°F)	60 minutes
	120°C (250°F)	30 minutes

Using temperatures higher than 110°C may reduce cure time. Application cure schedule must be established and qualified by the user.

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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