Technical Data Sheet

Light-Curable Adhesives, Sealants, and Masks

Product 40000

Soft, stress-free potting and barrier material for high-flex and high vibration medical device assemblies.

Tangent Product 40000 is an ultra-low viscosity, UV / Visible light curable adhesive that adheres to a variety of substrates including coated glass, metals, PET, and other plastics and films. This adhesive offers flexibility and softness that is unmatched by other UV curable acrylates. Product 40000 possesses a water-like viscosity that facilitates fast filling of cavities or molds without air entrapment. This product cures quickly with minimal shrinkage for less residual stress between bonded substrates.

When properly cured, the low durometer and stress-free adhesion of Product 40000 contribute to highly flexible bonds and laminations. This product is colorless, with superior optical clarity for excellent light transmission. This product will also absorb damaging vibration, enhancing component performance and longevity. Product 40000 cures with broad spectrum UV/visible light, (320-450nm), as well as LED systems with output of 365nm or 405nm. In the event that substrates block UV light transmission, this product will fully cure with only visible light, (> 400nm).

UNCURED PROPERTIES

COMPOSITION	Proprietary / Acrylate Monomer
VISCOSITY	40 - 60 cP [MPa], Brookfield LVT, 25 °C, 62/60 rpm
APPEARANCE	Clear liquid
SPECIFIC GRAVITY	1.1 at 25° C. [g/cm³]
FLASH POINT	200° F [93° C]
TOXICITY	Refer to Material Safety Data Sheet
SHELF LIFE	One Year

CURED PROPERTIES

DUROMETER	Shore 00 40, A – 5
WATER ABSORPTION	< 0.5% (24 hours @ 25° C.)
TEMPERATURE RANGE	-60° C to +140° 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, 0.019 - 0.039 inch (0.5 - 1.0mm) bond gap, time in seconds]

Honle Bluepoint LED	Spot Curing System, 405 nm,	2000 mW/cm^2	1-2 seconds
Honle Spot 100 LED	Flood Curing System, 405 nm,	250 mW/cm^2	4-5 seconds
Honle Bluepoint 4	Spot Curing System, 320-420 nm,	2000 mW/cm^2	1-2 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 100 gram bottles, 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, artifical 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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