Technical Data Sheet

Light-Curable Adhesives, Sealants, and Masks

Product 7090-V-HS

LED curable, medical device adhesive with ultra-low viscosity for bonding polycarbonate substrates. Moisture-resistant and non-yellowing.

Tangent Product 7090-V-HS is a wicking-grade, LED curable adhesive that bonds to polycarbonate blends typically used for medical device components. This product is well suited for bonding and sealing reservoirs, housings, and filter cartridges. The viscosity of this product makes it ideal for tongue and groove joint designs as well as bond joints with minimal gap allowance. When properly cured, Product 7090-V-HS will be clear, tack-free, and highly resistant to moisture and yellowing. This product cures very rapidly with broad spectrum UV lamps (320-450nm) and LED systems with outputs of 365nm or 405nm. Product 7090-V-HS has passed the testing required for USP Class VI approval. It is compatible with typical sterilization methods including gamma, ethylene oxide, and limited autoclave.

UNCURED PROPERTIES

COMPOSITION	Urethane Acrylate / Monomer Blend
VISCOSITY	50 - 100 cP at 25° C.
APPEARANCE	Light yellow to amber colored liquid
SPECIFIC GRAVITY	1.1 - 1.2 at 25° C.
FLASH POINT	Greater than 93° C.
TOXICITY	Refer to Material Safety Data Sheet
SHELF LIFE	One year

CURED PROPERTIES

DUROMETER	Shore D 85
WATER ABSORPTION	Less than 1% (24 hour immersion)
TEMPERATURE RANGE	- 40° C. to + 160° C.

OTHER CURED PROPERTIES

BIOCOMPATIBILITY TESTING, USP Class VI
(certificate copies on file)

Cytotoxicity	Pass
Irritation/Intracutaneous	Pass
Acute Systemic Toxicity	Pass
Implantation-14 day	Pass

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]

UV Light Curing

Honle Bluepoint 4 LED, Spot Curing System	405 nm @ 2000 mW/cm^2	1 second
Honle Bluepoint 4 LED, Flood Curing System	405 nm @ 200 mW/cm^2	1-2 seconds
Honle Bluepoint 4, Spot Curing System	320-450 nm @ 2000 mW/cm^2	1 second

Note: Actual UV 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. Equally, heat cure times are a guideline and may vary based on part size, configuration, adhesive volume, and temperature control. 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, 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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