



Technical Data Sheet

Light-Curable Adhesives, Sealants, and Masks

Product 8400

UV curable, medical plastics bonding adhesive with high peel strength and flexibility.

Tangent Product 8400 is a single component, solvent-free adhesive that bonds to many plastics including polyester, PVC, polyethylene, and polycarbonate. It also has measureable adhesion to glass and most stainless steel. When properly cured, Product 8400 demonstrates outstanding elongation and is highly flexible. Bonds prepared with 8400 are colorless, possess exceptional peel strength, and are resistant to yellowing, moisture, and some solvents. Product 8400 is particularly well suited for bonding flexible plastic films and tubing with minimal bond gap tolerance. Product 8400 cures in seconds when irradiated with broadband UV (320-450nm). Product 8400 has passed the testing required for USP Class VI biocompatibility approval. This product is compatible with typical sterilization methods including gamma, ethylene oxide, and limited autoclave. Product 8400 is also available in a UV/Visible light curing version, (8400-V). This enables curing through substrates containing UV blocking additives.

UNCURED PROPERTIES

COMPOSITION	Urethane Acrylate / Monomer Blend
VISCOSITY	100-200 cP at 25°C.
APPEARANCE	Clear 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

SHORE HARDNESS, DUROMETER	D 40-50
WATER ABSORPTION, % 24 hour immersion at 22°C	< 2%
TEMPERATURE RANGE	-40°C – 150°C
TENSILE AT BREAK, MPa (psi)	6.9 (1000)
REFRACTIVE INDEX,	1.502 @ 24°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]

Honle Bluepoint 4 LED, Spot Curing System	365 nm @ 2000 mW/cm ²	1 second
Honle Spot 100, Flood Curing System	365 nm @ 250 mW/cm ²	2 seconds
Honle Bluepoint 4, Spot Curing System	320-450 nm @ 2000 mW/cm ²	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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