Technical Data Sheet

Light-Curable Adhesives, Sealants, and Masks

Product 20104

UV curable mask for temporary surface protection during blasting and plating processes. Peels off easily at room temperature.

Tangent Product 20104 is a UV / Visible light curable masking material that provides excellent surface protection of rough or porous components during mild to moderate surface finishing processes such as grit blasting and polishing. This flexible, fast curing mask is ideal for protecting steel, aluminum, titanium, cobalt, and other commonly used metals in the aerospace and medical implant industries. Product 20104 contains no nonreactive solvents and cures in seconds when exposed to UV/visible light, (320-450nm). Tangent masks may be applied using pre-packed syringes or cartridges, as well as by brush, dip, or spray. After processing, it is easily removed by peeling at room temperature. Peeling can be made easier by incorporating a quick, hot water soak at 65°C [149°F]. Surfaces are residue-free after mask removal.

UNCURED PROPERTIES

COMPOSITION	Urethane Acrylate / Monomer Blend
VISCOSITY	20,000 cP at 25° C.
APPEARANCE	Semi-Transparent Gel.
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

DUROMETER	Shore D25
WATER ABSORPTION	Less than 1% (24 hour immersion)
TEMPERATURE RANGE	-45° C. to 145° C.

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CURE DATA / GUIDELINES [mask dispensed 2mm thick on a surface, time in seconds]

UV Curing

Honle UVAHAND, Flood Curing System	320-450 nm @ 100 mW/cm^2	15 seconds
Honle Ecocure, Spot Curing System	320-450 nm @ 2000 mW/cm^2	1-2 seconds

Note: Actual UV cure rate in a production environment is dependent upon light source intensity, surface distance from the light source, and thickness of dispensed mask. 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 pails, 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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