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518 SERIES

UV Curable Adhesives

DESCRIPTION

518 Series is a high performance structural adhesive for bonding polycarbonate, ABS and PVC. The adhesive rapidly cures when exposed to high intensity UV energy forming a tough, permanent bond. The single component formula contains no solvents and requires no mixing, and may be applied by standard dispensing equipment. The viscosity of 518 is available in a range of versions from a thin liquid to thixotropic gel. Applications allow tight tolerance lamination to thick section potting or encapsulating. Variations are available with a fluorescing dye to aid in post cure inspection.

When properly cured, 518 Series is a biocompatible polymer useful in medical applications. Series 518 is presently in use with devices requiring USP Class VI.

CURE SCHEDULE

Expose to a medium pressure mercury vapor type lamp operating at a minimum of 200 watts per inch input power.

Recommended
Minimum intensity*: 100 mW/cm² @ 365 nm

Cure time typically less than 5 seconds. Cures fully when exposed to high intensity UV-A spot sources, and long arc mercury lamps.

*Measured with a UVEXS Model PM 600 radiometer.

STORAGE AND HANDLING

Shelf life is warranted for a minimum of 6 months from date of shipment when stored in the original container, in darkness at 50°-80°F.

Potentially irritating to the skin. Avoid contact with skin and eyes, and use with proper ventilation as directed on the MSDS.

UNCURED PROPERTIES

Base resin:	Urethane acrylate
Percent solids:	100%
Components:	one
Color:	clear, straw
Specific gravity:	1.01
Flash point:	>200°F
Viscosity by product:	
518A	750 cps
519A (17D14-3)	2500 cps
519B (15D48-1)	55,000 cps, gel
Fluorescent versions:	518AF, 519AF

CURED PROPERTIES

Hardness:	80 (shore D)
Tensile (break):	4500 psi
Elongation:	5%
Refractive index:	1.51, typical
Modulus:	140,000 psi @ 2% elongation
Coefficient of linear expansion:	150x10 ⁶ cm/cm/°C
Dielectric strength:	850 volts/mil @ 20-mils

APPLICATION

518 adhesive is packaged in dispensing syringes for manual or pneumatic applicators, or in bulk containers. Uncured adhesive may be cleaned with MEK, IPA or acetone.