



Adhesive Systems, Inc.
An ISO 9001:2008 Certified Company

MAXIMUM PERFORMANCE SERIES

MP531812D

UV ADHESIVE

TECHNICAL DATA SHEET
TDS #: MP531812D
UV Adhesive

DESCRIPTION

MP531812D is a high performance UV curing adhesive engineered to bond metals and plastics. It can be used in a variety of product assemblies and it promotes innovative design solutions. Our MP531812D is a leading performer when used for dome coating and potting applications. MP531812D is often cured with an electrodeless lamp D, medium pressure metal halide lamp. This UV adhesive also works well with UV light emitted diodes (UV LED) at wavelengths of 365 nm to 395 nm. Design engineers select MP531812D for the optimum in finished product quality, reliability, performance, and cost effectiveness. MP531812D is an essential tool in improving overall product quality, lowering per unit cost, and reducing processing time.

PHYSICAL PROPERTIES (UNCURED):

Chemical Class	Acrylate Solvent
Content	None
Appearance	Colorless Liquid
Density, g/ml	1.05
Viscosity, 25 °C, 20 RPM	1500cp-2400cp
Flash Point °C	77

Benefits

- Superior Bond Strength
- Solvent Free
- Low Odor
- Improves Finished Product Quality
- Durable
- Good Impact and Vibration Resistance
- Easily Automated
- No Clean Up

PHYSICAL PROPERTIES (CURED):

Durometer Hardness	D80
Water Absorption, 2 hrs. @100 °C	1.6%
Water Absorption, 24 hrs. @ 25 °C	0.2%
Glass Transition Temperature, °C	90
Tensile Strength PSI	7950
Dielectric Constant	<4
Dielectric Strength, volts/mil	>400
Mass Loss % @ 100 °C for 1 hr.	0.00%
Mass Loss % @ 150 °C for 1 hr.	0.00%
Mass Loss % @ 200 °C for 1 hr.	0.35%
Working Temperature °F	-60 to 300
Flexibility@RT	None
Blue Fluorescing	None

Substrate Applications

Plastics

Polyethylene, Polypropylene requires surface treatment such as corona, etc.

Metal

CURE SCHEDULE

Medium Pressure Metal Halide Flood Lamp Station @ 12mW/cm2	Cured surface is very dry @ 12 mW/cm2 for 2 minutes
Fusion F 300 S Lamp D Conveyor @ 5 FPM	Cure depth @ 0.45 inch
Fusion F 300 S Lamp D Conveyor @ 10 FPM	Cure depth @ 0.33 inch
Fusion F 300 S Lamp D Conveyor @ 20 FPM	Cure depth @ 0.22 inch
Fixed time between 2 Glass Slides @ low intensity black light	0.5 second
Flood Lamp @ 12 mW/cm for 1 minute	Cure Depth @0.3 inch
Flood Lamp @ 12 mW/cm for 2 minute	Cure Depth @0.4 inch
Flood Lamp @ 12 mW/cm for 3 minute	Cure Depth @0.6 inch
UV LED 365 nm to 395 nm	Time depends on the intensity and wavelength

Storage and Shelf Life

This UV Cure material should be stored in a dark place, above 0°C and below 30 °C. The shelf life is one year from the date of manufacture.



Engineering Excellence

For technical information and support call **1-800-552-0299** or visit our website at

www.instantca.com

Directions for Use

- 1. This product cures at exposure to daylight. Minimize to expose during storage and handling.**
- 2. Surface of substrates should be clean and free from grease, mold release, or other contaminants.**
- 3. Cure speed is dependent on UV energy, intensity of UV Light, required depth of cure and percentage of light transmission of substrates.**
- 4. For the best performance, Fusion Lamp D or medium pressure metal halide should be used. Also, UVLED at 365 nm to 395 nm can be used.**
- 5. Allow cured parts to cool before testing to any service loads.**
- 6. Air inhibits a surface cure, to minimize this effect an inert gas such as nitrogen can be used or a higher intensity.**