

# MicroCoat Technologies

1316 Somerset Drive McKinney, TX 75070 Tel +1-972-678-4950 Fax +1-214-257-8890

Unparalleled in Polymer Coatings and Adhesives Technology™

## Product Data Sheet

### MicroCoat Clear Coating SuperCure™ OS-218-B

MicroCoat Technologies OS-218-B is a slightly opaque microelectronic grade acrylate dual cure coating for electronics applications with operating temperatures of  $-45^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$ . It is a single component 100% solids liquid that cures in seconds to a tough, hard, polymer, when exposed to ultraviolet light. Specifically formulated for adhering glass windows for EPROM's, LED's, detectors, etc., to metal or molded plastic housings, and crystals to various types of substrates and may also be used for coating/encapsulating electronic components. This exceptionally strong coating/adhesive is also used for SMD devices and through hole connectors and switches to hold them firmly in place. Because of its high dielectric strength the OS-218-B is used as a voltage breakdown dam as standard practice.

One of the key properties of this adhesive is its extremely fast cure and its tenacity to adhere to glass, silicon, polished metals such as aluminum and chrome, PCB's, silver and gold plate, molded plastics, etc. Thin films ( $<.010''$ ) may be cured in under 10 seconds, and thicker films (up to about  $.065''$ ), in 20 - 25 seconds. OS-218-B is exceptionally stable stored at room temperature for up to 12 months in a cool ( $5^{\circ}\text{C}$ - $22^{\circ}\text{C}$ ), dark place in the original container.

The OS-218-B is sensitive to UV from 320 - 380 nanometers with peak sensitivity around 365 nm. A filled area, as compared to a glob top or film will require more energy or a longer cure cycle due to its thicker cross section.

After cure, adhesion to ceramic, glass, silicon, metals, printed circuit boards, and other glass filled plastics is excellent.

Viscosity:	Thixotropic gel
Color:	Clear Hazy to light straw
Thermal limits Operating	$-45^{\circ}\text{C}$ to $+150^{\circ}\text{C}$
Short time Thermal limits	4-6 minutes at $250^{\circ}\text{C}$ at solder reflow temperatures
Nominal hardness Shore "D"	75
Tensile strength (psi)	3,500
Elongation at break	25% (Before heat cure)
Liner coefficient of expansion (in/in/ $^{\circ}\text{C}$ x $10^{-6}$ )	90
Shrinkage	$<1\%$
Dielectric strength (Volts/mil)	1,600
Surface resistivity ( $10^{12}$ ohm)	230
Dielectric constant at 1 MHz	3.98
Dissipation factor at 1 MHz	0.06
Outgassing	$<30\text{ppm}$ inclusive
Shelf Life	1 Year at $2^{\circ}\text{C}$ to $25^{\circ}\text{C}$
Easy clean up with IPA	
Supplied in 25cc syringes.	
OS-218-B 11/23/01	

The information contained herein, is, to the best of our knowledge accurate. However, MicroCoat Technology does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. The information contained herein is considered typical properties and is not intended to be used as specifications for our products. This information is offered solely to assist purchasers in selecting the appropriate products for purchaser's own testing. All products may present unknown hazards and should be used with the proper precautions. Although certain hazards are described herein and in the Material Safety Data Sheets, we cannot guarantee that these are the only hazards that exist. Repeated and prolonged exposure to epoxy resins can cause sensitization or other allergic responses.