

# MC166-IPA-60

(63% solid in IPA)

## High Refractive Index, UV-curable Coating for Anti-Reflection Films Applications

MC166-IPA-60 is supplied as a 63% solid content in isopropyl alcohol (IPA). MC166-IPA-60 is readily dissolved in common coating resin systems including isopropyl alcohol (IPA), 1-methoxy-2-propanol (PM) or mixtures of those two solvents for obtaining the desirable coating thickness. Fine-tuning the coating process is required for achieving optimum coating performances.

**The recommended solvent for use in dilution is isopropyl alcohol. For multilayer antireflection film for targeting  $\lambda/4$  with  $\lambda$  at 500 nm, the suggested starting solid content for coating is 5 to 6% when using the wire-rod bar #2.5. Fine-tuning the solid concentration and the process are required for achieving optimum reflectance performances.**

**MC166-IPA-60 can be coated onto plastic film or glass surfaces or onto cured coated surfaces.**

### Process

Substrates: Plastic films or glass substrates  
Coating: Wire Bar, roller coat, knife coat or spin coat.  
Precuring: 80 °C for 1 min. with convection oven, IR heating or Room temperature until solvent has evaporated  
Curing: High pressure mercury lamp or Fusion lamp  
UV dose: 500 mJ/cm<sup>2</sup> – 700 mJ/cm<sup>2</sup> – in nitrogen

Viscosity of MC166-IPA-60 at 25 °C: 32 – 40 cps

### Properties of cured film

Properties of MC166	
Refractive index (589 nm @ 25 ° C)	1.66 – 1.67
Haze (%)*	<0.4
% Transmission*	>90
Hardness	H – 2H
Density (g/mL)	1.42
Adhesion to film (un-treated)	excellent

\*0.1 to 0.4  $\mu$ m coated PET or TAC film

### SAFETY AND HANDLING

The un-cured adhesive can be cleaned from apparatus with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), or commercial alcohol based cleaning solution.

Use caution in handling this material and solvent. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves, safety goggles and face shield (to avoid both splashing and solvent fumes) for handling solvent-based materials.** . . Read [Material Safety Data Sheet](#) before handling.

The information presented here represents our best available information and is believed to be reliable, but it and does not constitute any guarantee or warranty. Inasmuch as Addison Clear Wave has no control over the exact manner in which others may use this information, it does not guarantee the results to be obtained. Nor does the company make any expressed or implied warranty of merchantability, or fitness for a particular purpose concerning the effects or results of such use. Purchasers are further responsible for determining the suitability of the product for its intended use and the appropriate manner of utilizing the production processes and applications so as to ensure safety, quality and effectiveness. Addison Clear Wave makes no warranties and assumes no liability in connection with the use or inability to use this product.