

## Best Practices for Working with Water-Based Primers

Water-based primers are favored by converters worldwide because they are safe for the environment and workers, promote adhesion to many substrates and extrudates, and enhance performance in a wide variety of extrusion coating and extrusion lamination applications. Primers can be applied in-line with the extrusion coating process or out-of-line and by several different application methods, such as smooth roll, gravure cylinder, and more but typically no matter what the application method is, these three best practices must be in place to achieve optimal adhesion levels in extruded structures.

### 1. Pretreat Film Substrates

Corona discharge or flame treatment prior to priming with water-based primers will help oxidize the film and raise the surface energy which helps promote wet-out. The increase in surface energy and oxidation help create the best possible bonds which can lead to a more robust converted structure. Even if a film is pretreated by the film supplier, re-treatment of these substrates is recommended to ensure contaminants are adequately removed and final bonds are strong. For more information on treatment before priming, and approximate treatment levels for select films, please refer to our Primer Intelligence article "[Treatment + Primer=Success.](#)"

### 2. Apply the Proper Coat Weight

Applying too little, too much, or an uneven layer of primer can negatively impact adhesion and ultimately the integrity of the final structure. The proper coat weight will vary depending on which materials and application method are used, but the technical data sheet of the MICA primer you are working with can provide starting coat weight recommendations. Since many water-based primers are colorless, it can be difficult to quantify the amount of primer that is applied to film. Mica Corporation has developed test methods to help detect the presence of primer, and in some cases, the approximate coat weight. To learn more about these test methods, please [contact us](#).

### 3. Adequately Dry the Primer

Water-based primers need adequate time in the drying oven to completely remove all water prior to the extrusion coating or extrusion lamination process to ensure optimal bond strengths. The solids level and primer application method used will impact the length of time or temperature settings needed for the structure to adequately dry. Please refer to the technical data sheet of the MICA water-based primer you are using to determine the best practices for diluting and drying.

*Need help implementing these best practices? [Contact us](#).*