Akron Coating and Adhesives
tech brief

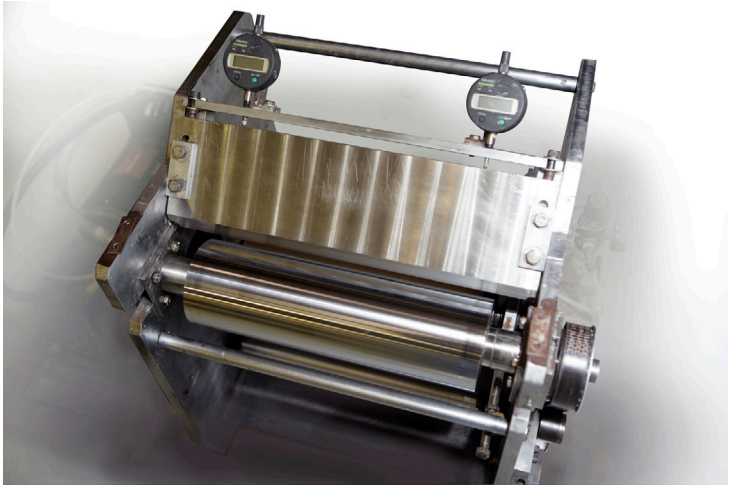
Quick tips from our adhesive and coating experts

Matching Adhesives and Application Techniques

Example of wire wound bar coating

The first step in pairing an adhesive and coating method is to consider the particular challenges of your application. Some products need nothing more complicated than a steady hand with a paintbrush, while certain highly engineered parts may require a perfectly applied coating with tolerances measured by the thousandths of an inch. It should come as no surprise that different application techniques require adhesives with different physical properties. Rheology, viscosity, and percent solids all can be adjusted to make the adhesive fit your application requirements. For example, a gravure coater works best when the adhesive has a viscosity below 1,500 cps, whereas a knife-over-roll coater typically requires a viscosity of 10,000 cps. Spray coating may work best at 500 cps.

The melting point and other physical properties of heat-activated adhesives must be carefully matched to manufacturing conditions. Typically, the adhesive is activated by residual heat created when plastic parts are formed. However, that heat can vary dramatically, depending on the equipment used, the mass of the injected thermoplastic material, and the size of the part that is to be bonded. An extruder may activate the adhesive at 400°F, while a calender might activate it at 250°F, and an injection molder at 200°F or less. Your adhesives supplier can recommend the best adhesive and the conditions most likely to succeed in producing a good bond.



Knife over roll coating head

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