



Aqueous Laminating Adhesives

INTRODUCTION

This technical bulletin is written to enhance the understanding of applications for Northwest Coatings' water base, laminating adhesives.

PRODUCTS

These adhesives are used to permanently laminate poly films to printed substrates such as paper, foil or films. There are two types of laminating adhesives.

Pressure Sensitive Adhesives

PSA's are used when the substrates involved will not allow the adhesives to dry after they are nipped together such as when two films are laminated.

These adhesives must be dried completely before the lamination is formed.

Wet Lamination Adhesives

These permanent adhesives can be used when one of the substrates is paper. They are high in solids content (60% or more) and will dry through the paper.

VISCOSITY

These adhesives can be manufactured to the user's needs. Variations in viscosity do not affect the bond strength of the adhesive but may affect the drying requirement and time.

ADHESIVE LAYDOWN

It is difficult to specify the amount of adhesive to be applied. One to three pounds per ream (3000 square feet) is typical but the application required to achieve the desired bond strength will depend on the type of ink used, the print coverage and the porosity of the substrates. For estimating purposes, films generally use one pound per ream while uncoated paper stocks may need as much as three pounds per ream.

ANILOX ROLLS

The cell count and volume of the anilox will vary with substrates. A tri-helical or quad type engraving will provide the best transfer and help keep the adhesive from drying in the cells. A doctor blade should be used.

FILM TENSION

Care should be taken to avoid stretching the laminating film. Stretched film may not relax uniformly, resulting in delamination or curling of the lamination.

FILM

These adhesives are formulated for use with a wide range of poly films. It is important that samples of the actual films be tested before adhesives are used on a production basis.

The polypropylene or other poly film surface must be treated to achieve the desired bond strength. It should be noted that Corona treatment degrades with time. Film should be purchased from a reliable supplier and should be used promptly. Incoming quality control should include a surface tension test to confirm that the film surface has a treatment level of 38 dynes per centimeter or greater. To assure proper surface treatment, some converters are installing in-line Corona treaters. In this way the operator is assured that the film treatment is adequate.

OTHER CONSIDERATIONS

Although these adhesives bond to most printed substrates, bond strength may be adversely affected when the bonding surface involves inks that contain anti-scuff additives such as silicone or wax. Also, anti-blocking spray powder, used to excess, may affect the appearance of the lamination. (overleaf)





Northwest Coatings

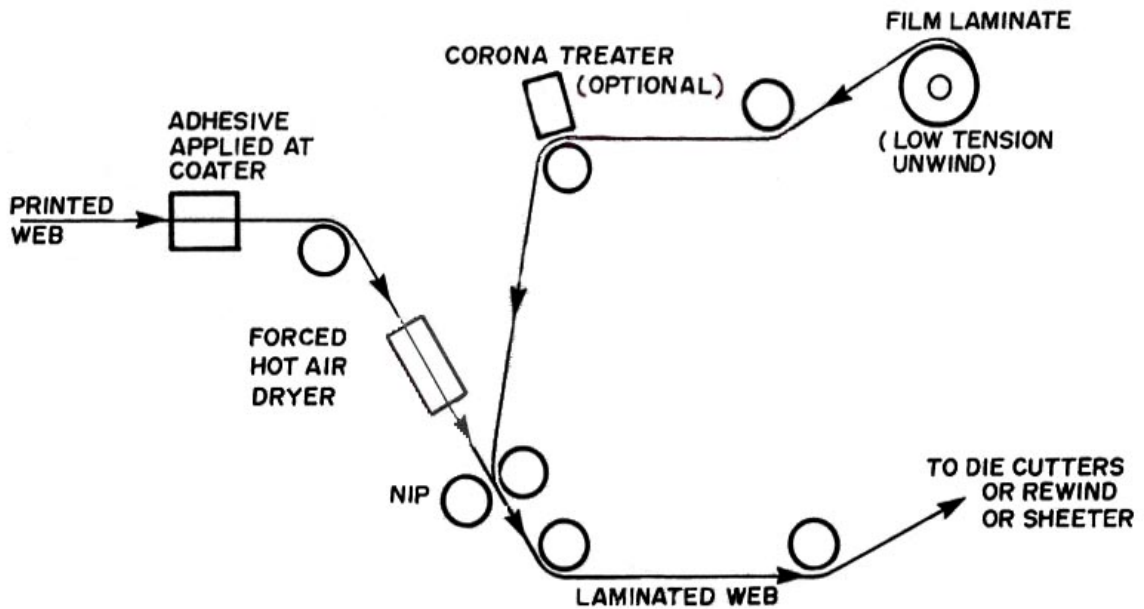
TECHNICAL BULLETIN

UV/EB ADHESIVES & COATINGS

PRESS CONFIGURATIONS

The following drawings illustrate typical equipment configurations for the application of pressure sensitive and wet lamination adhesives.

PRESSURE SENSITIVE ADHESIVE



WET LAMINATION ADHESIVE

