

PROCESS DEVELOPMENT LABORATORY FACILITY

CAPABILITIES

Aspect Automation offers laboratory and pilot services for product development, methods testing, and scale-up programs. We can help you test your materials and develop specifications for your equipment. We provide secure facilities and experienced personnel for short-run testing or longer-term developmental efforts working with laminates, tapes, packaging materials, and piggy-backs made of paper, film, foil, or non-wovens.

COATING AND LAMINATING PROCESSES AVAILABLE

Precision Slot Die

- Hot Melts / Thermoplastics
 - ◆ Full-width coating
 - ◆ Stripe coating

Rotary Screen Pattern Coating

- Hot Melts / Thermoplastics
 - ◆ Spot application of coating
 - ◆ Application of coating in an infinite variety of patterns

Roll Coating

- Hot Melts / Thermoplastics
- 100% Solids / Silicones
 - ◆ Full-width coating

Laminating

- Thermal
- Ambient

Radiation Curing

- UV-Curable Coatings & Adhesives
 - ◆ Slot die coating
 - ◆ Rotary screen pattern coating
 - ◆ Roll coating

EQUIPMENT PARAMETERS

Equipment Parameters	Slot Die Coater / Laminator	Rotary Screen Pattern Coater	Roll Coater / Laminator
Coating Methods	Precision Slot Die	Rotary Screen Pattern Coating	Gravure / Differential Roll
Max. Coating Width	12" (305 mm)	11" (280 mm)	20" (508 mm)
Max. Web Width	14" (355 mm)	11.5" (292 mm)	21" (533 mm)
Min. Web Width	4" (101 mm)	4" (101 mm)	6" (152 mm)
Speed Range	15-500 fpm (5-152 m/m)	15-500 fpm (5-152 m/m)	15-500 fpm (5-152 m/m)
Coating Deposition - Hot Melts	12-1,420 gm/m ² (.5-60 mils)	Determined by Pattern	2.5-47 gm/m ² (.1-2 mils)
Coating Deposition - Silicones	NA	NA	1-3 gm/m ²
Max. Unwind & Rewind Roll Diameter	24" (610 mm)	24" (610 mm)	24" (610 mm)

TESTING PROGRAM

Our facilities are available on a full-day basis. Typically, our service involves:

- Evaluation of project scope
- Setup of equipment in required configuration
- Preparation of equipment
- Clean-up once testing is completed

TESTING & DEVELOPMENT

Product Testing and Development Work

1. Initial Determination

Aspect Automation will work with you to evaluate your materials, substrates, and potential end-use objectives and requirements.

2. Scheduling

Aspect Automation will then schedule a testing date. Your Aspect Automation Program Manager will coordinate all facets of your test program.

3. Preparation

Components to be tested should be shipped to Aspect Automation at least two weeks in advance of the test date. You will also need to complete our Laboratory Work Questionnaire and return a signed copy of the Terms and Conditions page, along with a written purchase order. Aspect Automation can assist you in locating the right materials and suppliers, if required.

4. Set-up and Trial Run

This generally involves purging our chemical delivery system, adjusting the coating head to your web width, adjusting web tension, and configuring our equipment to your components. Purging a hot-melt delivery system will require the use of at least 50 pounds of material, preferably the actual coating material.

5. Demonstration

Once our equipment has been configured to handle your components, you are encouraged to attend a demonstration of the coating process.

6. Evaluation

Your Aspect Automation Program Manager will discuss the results of the test session with you.

Scale-Up Programs

7. Production

Once set-up is complete, you are encouraged to participate in the manufacturing process to provide continuous quality control.

MATERIAL PARAMETERS

Hot-melt material may be solid, liquid, granular, pellets, pillows, or blocks.

If you will be providing material in 55-gallon (200 liter) drums, please let us know at least three weeks prior to the trial.

Application temperature should not exceed 480° F (249° C). Viscosity at application temperature should not exceed 100,000 cps.

Web stock widths must be within the parameters listed in the table on page 2. All rolls should be on 3" or 6" I.D. cores; please see machine specifications for roll diameters.

Minimum web lengths vary according to material, applications, and the tests being performed.

RATES

Aspect Automation will provide its facility, equipment, and personnel for Testing & Development Work or Scale-Up Programs at the following rates:

Daily Rate (8 hours) - \$4,500.00

Overtime (> 8 hours) - \$650 per hour

Please note that material, supplies, and shipping costs are not included in these prices.

We recommend that you provide all materials. Materials provided by Aspect Automation for set-ups, demonstration, and testing will be billed at cost plus 40%.

Shipping costs, if prepaid by Aspect Automation, will be billed at cost plus 40%.

Aspect Automation reserves the right to reject purchaser-supplied materials if those materials are determined to be unsuitable for processing.

Additional equipment or special modifications may incur additional charges.