

**STANDARD OPERATING PROCEDURE**

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**1.0 SCOPE**

- 1.1 Method determines ease of release of an adhesive from a release liner.
- 1.2 **CAUTION: Test must be performed on fully cured release liners for meaningful results.**
- 1.3 Test results out of specification may be indicative of improperly cured silicone or low coating weights. Significant if end user is direct coating release liner (transfer coating).
- 1.4 Test results vary with different adhesives. Release specifications established for each adhesive and release formulation used.
- 1.5 Applicable to all thermal and radiation cured release coated materials such as paper and film liners. This method is not suitable for solvent sensitive substrates such as polystyrene and polyvinylchloride.

**2.0 RESPONSIBILITY**

- 2.1 Personnel performing test ensures accuracy.
- 2.2 QA Engineer/Supervisors ensure adherence to procedure.

**3.0 DEFINITIONS**

- 3.1 Wet Spread Release - measures force required to separate an adhesive from a release liner at a specified angle and speed.
- 3.2 Methyl Ethyl Ketone – MEK

**4.0 APPARATUS**

- 4.1 Personal Protective Equipment
  - 4.1.1 Safety Glasses, Nitrile Gloves, Safety Shoes, Fume Hood
- 4.2 Test Specimen
  - 4.2.1 8.5" x 11" coated substrate from center of web.
- 4.3 Test Equipment
  - 4.3.1 Acrylic Pressure Sensitive Adhesive
  - 4.3.2 9" x 12" .00142" polyester raw stock film
  - 4.3.3 Squeegee
  - 4.3.4 .003" Bird Bar (adhesive drawdown bar)
  - 4.3.5 MEK Bath (to clean bird bar)
  - 4.3.6 Clean Shop Rags
  - 4.3.7 Forced Convection Oven type maintained at 200°F (150°F for oven aging test)
  - 4.3.8 Timer or stop watch of equivalent
  - 4.3.9 Stickler Peel Tester or Cheminstruments Adhesion/Release Tester
  - 4.3.10 Ohaus Spring Scale (model #8011) or equivalent 250 gr
  - 4.3.11 Razor Knife
  - 4.3.12 2" x 24" Template
  - 4.3.13 1" Slitter/Template
  - 4.3.14 Two-sided Tape
  - 4.3.15 TLMI Release and Adhesion Tester (for specific products)



## PERFORMANCE PLASTICS

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- 4.3.16 E-Z Data System
- 4.3.17 12" x 12" Cardboard

#### 5.0 PROCEDURE

- 5.1 Place sample coated side up on lab test table.
- 5.2 Draw down with bird bar.
- 5.3 Place draw down samples on cardboard and place in oven for four minutes.
- 5.4 Remove samples from oven and let cool for two minutes.
- 5.5 Apply polyester raw stock to adhesive side of sample.
- 5.6 Take squeegee and make one pass in each direction to remove air bubbles.
- 5.7 Place sample on cutting table and remove excess polyester film from edge of laminate.
- 5.8 Place appropriate template on sample. Reference QA Report for exceptions to width, speed and angle of peel.
  - 5.8.1 Cut sample 2" x 8" long (parallel to 8.5" side).
  - 5.8.2 Save balance of sample as a retain in labeled envelope.
- 5.9 Peel back 1" of face stock and place a ½" pull tab. Use staple when necessary.
- 5.10 Place two strips of two-sided tape to Stickler or Cheminstrument.
- 5.11 Place liner side of 2" x 8" sample onto two-sided tape.
- 5.12 Place spring scale clamp on ½" pull tab.
- 5.13 Start tester. Disregard first inch of values, then average remaining two inches.
  - 5.13.1 Repeat steps 5.9 thru 5.13 for 24 hour room temperature and 24 hour oven aging samples.
- 5.14 Reference Dwell Time Matrix for time frame and tests to perform for each release series.

#### 6.0 RECORDS

- 6.1 None

#### 7.0 REPORT

- 7.1 Record average peel value on QA Report

**“FOR REFERENCE ONLY – PLEASE CONTACT A SAINT-GOBAIN REPRESENTATIVE FOR CURRENT TEST REVISION”**