

A person wearing a white lab coat is shown from the waist down, leaning over a large, light-colored sheet of material. Their hands are positioned near the bottom edge of the sheet, which appears to be held taut. The background is slightly blurred, showing industrial equipment and a yellow light source.

Mounting Decorative Trim/ PVC Trim for Windows Competitor Comparison

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Customer	Pauley Plastics
Project name, project place (if applicable)	
Project number (if applicable)	
Specification (if applicable)	
Application	ITC – BI – Windows – Mounting
Date of receipt of samples	4/21/24
Report number(s)	2024-01085-US
tesa product(s)	51970
Author of test report	Nick Jensen

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5/3/2024

Date

Nick Jensen
Signature

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1. Background of Test Program
2. Tape Product and Product Construction
3. Test Method / Test Results
4. Conclusions

1. Test Program Background

This testing aims to gauge the performance of Pauley Plastics' product made with tesa tape versus a similar competitor product with an alleged acrylic foam adhesive system with a particular focus on long term product performance and ultimate bonding strength.

Substrates

- PVC, customer provided

Testing performed

- Dynamic Shear (J0PM0164)
 - After 72 hr dwell at lab conditions
 - After 72 hr dwell + 120 hr climate cycling (hot/cold) with high humidity
 - After 72 hr dwell + 120 hr climate cycling (hot/cold) with low humidity

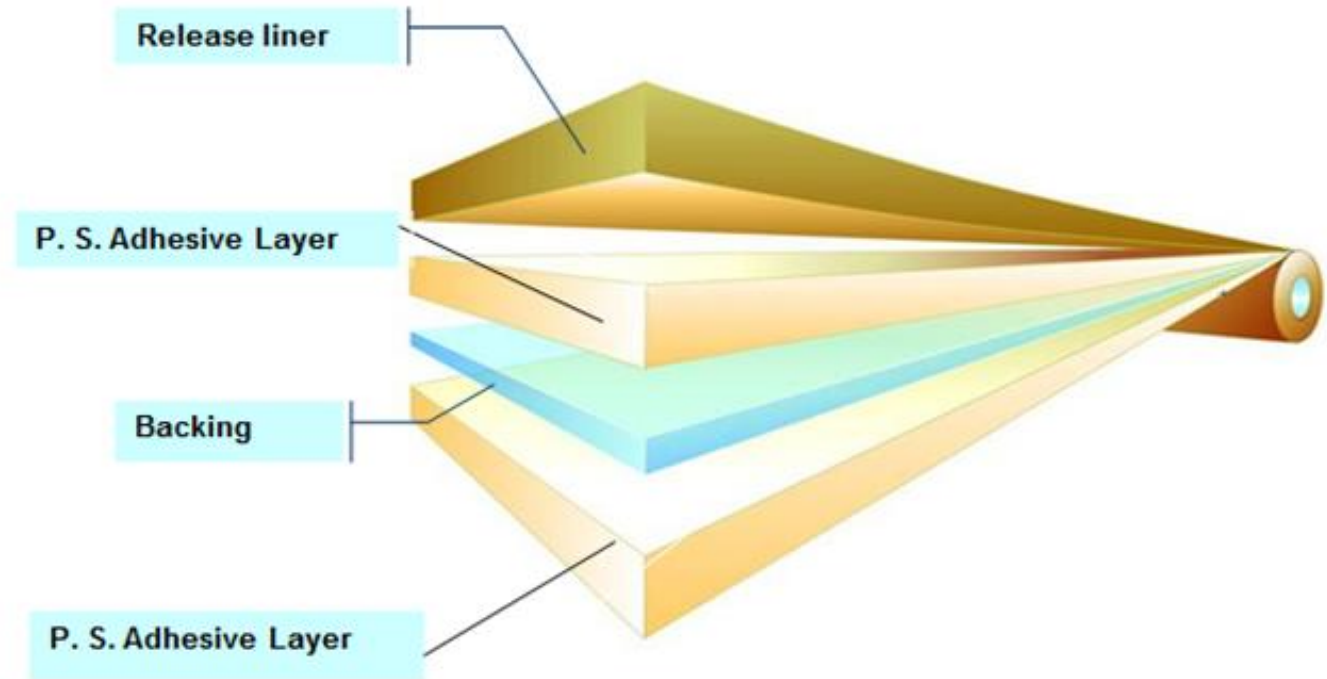
Tapes Tested

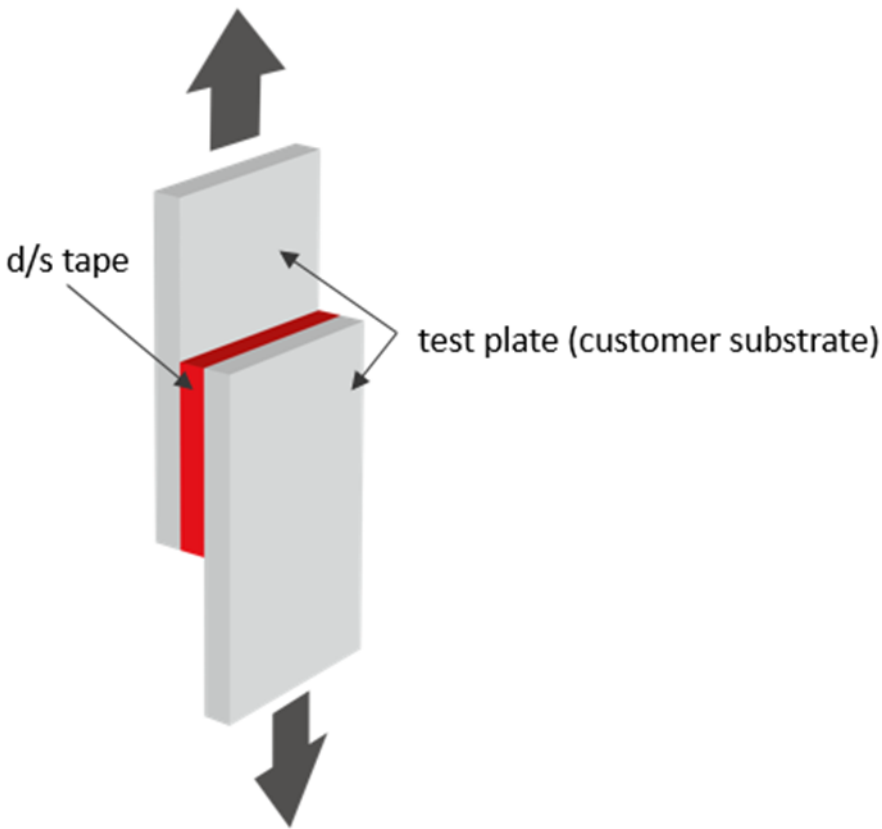
51970

220 μm (8.7 mil) total thickness, double sided tape

Polypropylene Film Backing

Tackified Acrylic Adhesive





Test method tesa J0PM0164
According to ASTM D 1002

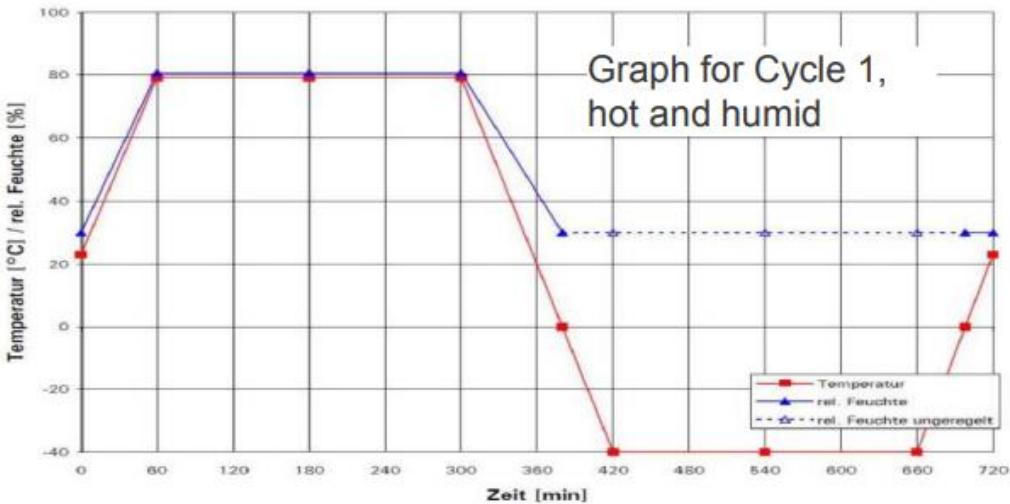
Test Conditions	
Time to Measurement	▪ 72 hour dwell
Test Temperature	▪ 23 ± 1 ° C 50 ± 5 % rel. humidity
Cleaning	▪ 50/50 IPA/H ₂ O
Pressurization	▪ 100 N/cm² for 60 seconds
Reinforcement	▪ None
Sample Area	▪ 4.75 cm²
Test Rate	▪ 50 mm/min
Pretreatment	▪ Tape pre-applied to one customer substrate
Unit	▪ N/cm²

TEST REPORT

3. Climate Chamber



Storage conducted using
Environmental Climate
Chamber #4 and #5



Climate Chamber Conditions

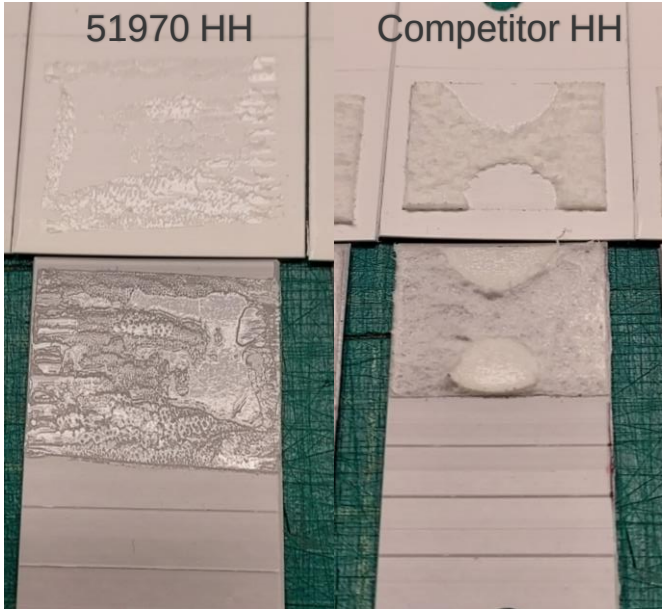
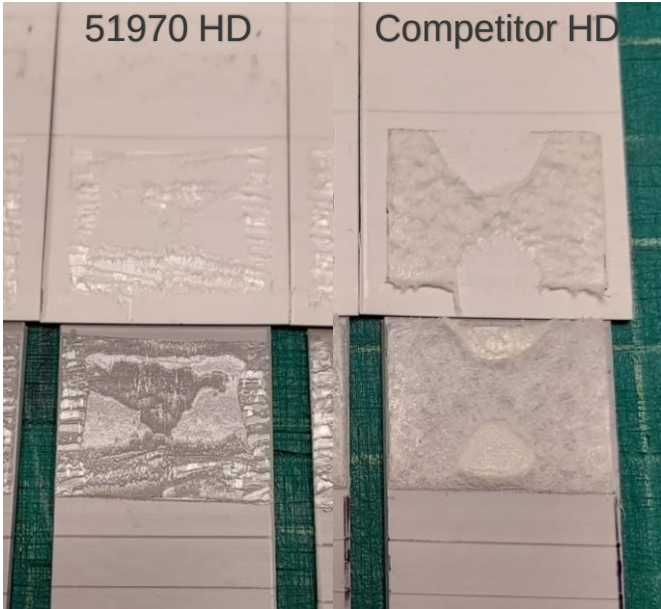
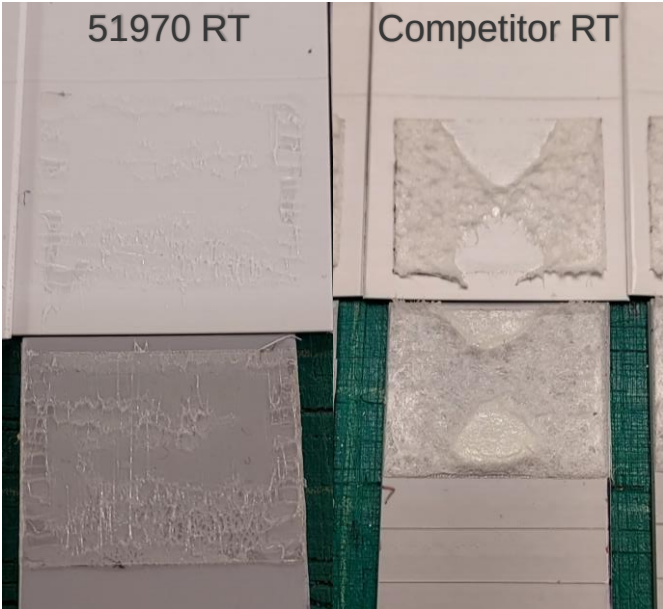
Time to Measurement	Climate Cycle (120 Hrs.) after 72 hr dwell in lab
Temperature	1. $80 \pm 1^{\circ}\text{C}$, $80 \pm 5\%$ rel. humidity 1. $-40 \pm 1^{\circ}\text{C}$, Undefined rel. humidity 2. $80 \pm 1^{\circ}\text{C}$, $30 \pm 5\%$ rel. humidity* 2. $-40 \pm 1^{\circ}\text{C}$, Undefined rel. humidity
Recondition Time	>4 hr
Recondition Temperature	$23 \pm 1^{\circ}\text{C}$, $50 \pm 5\%$ rel. humidity

*30% rel. humidity was based on average climate data from around Arizona.

3. Dynamic Shear and Climate Cycle Results

Product	Condition	DS Resistance (N/cm²)	Failure Mode
51970	RT	58.9	Adhesive/cohesive
Competitor	RT	56.2	Foam Split
51970	HD	58.4	Adhesive/cohesive
Competitor	HD	60.7	Foam Split
51970	HH	56.6	Adhesive/cohesive
Competitor	HH	54.4	Foam Split

- RT = room temp./lab conditions
HD = hot and dry climate cycle
HH = hot and humid climate cycle
- Between the two different tape systems, performance was competitive. Values and failure modes were consistent in all conditions and tapes used.



4. Conclusions

- Testing of 51970 versus the competing tape shows similar performance at all conditions tested, with 51970 showing a slightly higher average.
- The most arduous condition, high heat with high humidity, showed 51970 as having slightly superior performance.
- With the performance being so similar between the two, the desired failure mode would be the biggest distinguishing feature.



THANK YOU

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