

Advantek Cover Tape (HUC0054-500) Qualification Report



Objective

- To migrate to new cover tape with same supplier of the carrier tape.

Existing Carrier tape and cover tape have different supplier.

FROM:

Carrier Tape: **Advantek- SOT143-AV500.P6. P4 W8 L500**

Cover Tape: **3M- 2675 W5.4 L475 ANTI-STAT**

TO:

Carrier Tape: **Advantek- SOT143-AV500.P6. P4 W8 L500**

Cover Tape: **Advantek- HUC0054-500**

Existing Material

Cover Tape Information

Supplier: 3M

Part Number: 2675 W5.4 L475 ANTI-STAT

Dimension

Width: 5.4 mm

Length: 475 meters

Proposed Material

Cover Tape Information

Supplier: Advantek

Part Number: HUC0054-500

Dimension

Width: 5.4 mm

Length: 500 meters

Drawing →



HUC0054-500
Drawing

SDS (Technical Data Sheet) →



HUC and IP4035 C
Material PBF-T

Material Comparison

Properties	3M (2675 W5.4 L475 ANTI-STAT)	Advantek (HUC0054-500)
Tape Width	5.4 mm	5.4mm
Tape Thickness	0.062 mm	0.050 mm
Tensile Strength	7,252 PSI	11,000 PSI
Transparency	Transmittance: 85.5%; Haze: 29.5%; Clarity: 80.6%	Transmittance: 90%; Haze: 22%; Clarity: 89%
Color	Transparent	Transparent
Surface Resistivity	Adhesive side: 1.0E10 Ohms/sq. Base film side: 1.0E10Ohms/sq.	Adhesive side: $\geq 1.0E5$, $< 1.0E10$ Ohms/sq. Base film side: $\geq 1.0E5$, $< 1.0E11$ Ohms/sq.
Material Composition	Polyester + Synthetic polymer	Polyethylene + Polyethylene Terephthalate
CPK <small>(Using Advantek- SOT143-AV500.P6. P4 W8 L500)</small>	4.00	9.22

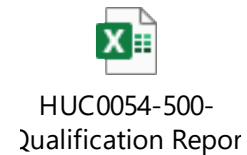
Proposed Material Validation

Dimensional Inspection

Description	LSL	USL	Sample					Result
			1	2	3	4	5	
Width	5.3mm	5.5mm	5.4	5.4	5.4	5.4	5.4	Passed
Thickness	0.04mm	0.06mm	0.048	0.050	0.050	0.048	0.050	Passed

Functional

Peel Strength Test →

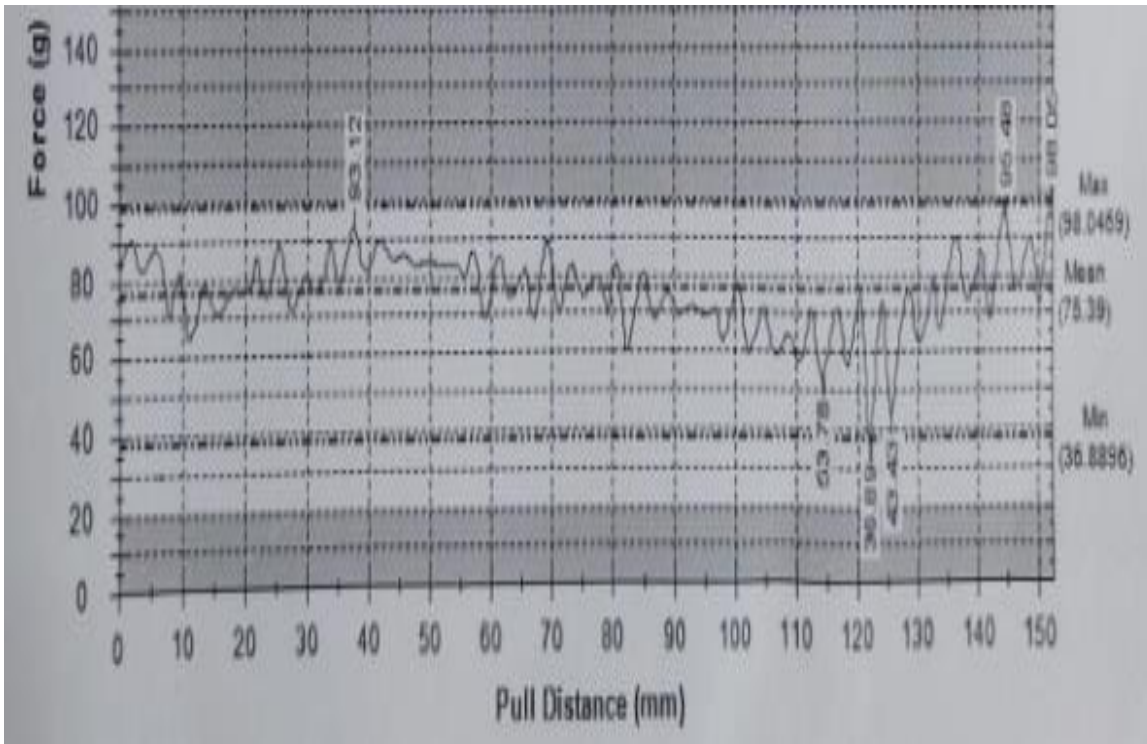


	<u>COMBINED SIDE</u>	<u>SPROCKET SIDE</u>	<u>EDGE SIDE</u>
CpK	9.219	8.200	9.048

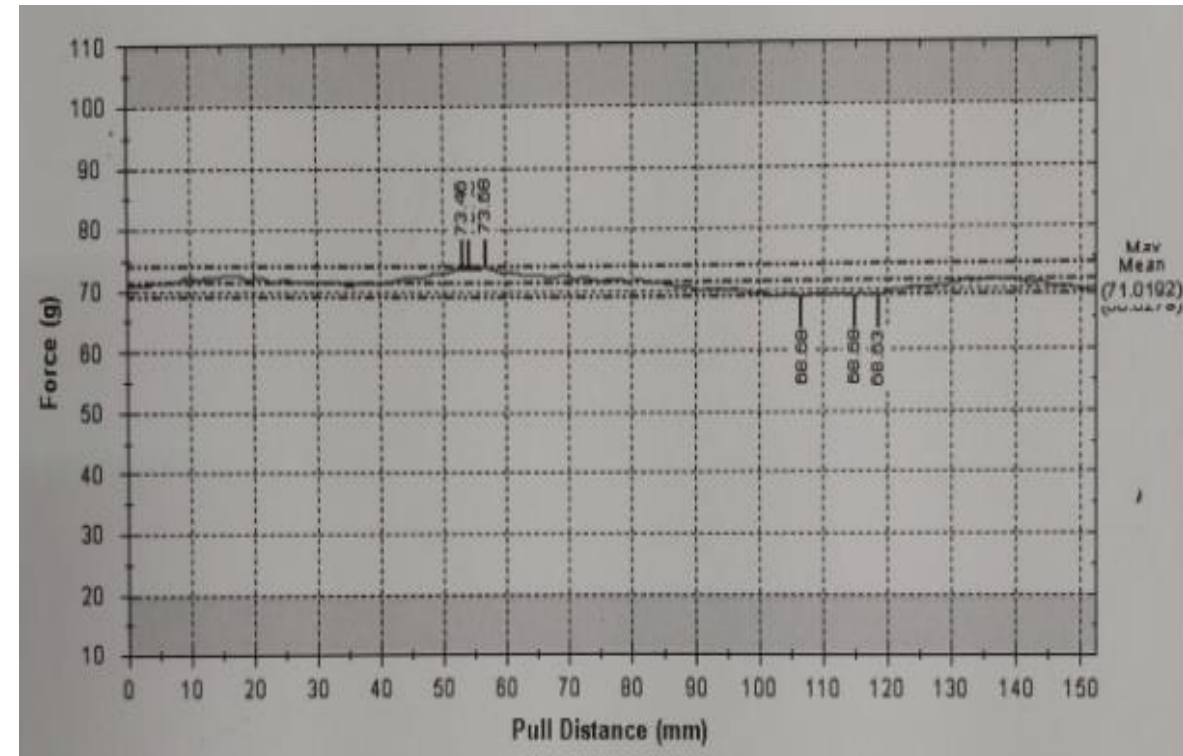
Result: Passed

Remarks: The Advantek HUC0054-500 cover tape passed Dimensional and functional test.

PST Comparison (Existing vs Proposed)



3M Cover tape & Advantek Carrier Tape



Advantek Cover tape & Advantek Carrier Tape

Remarks: The Advantek HUC0054-500 cover tape PST graph is more stable than 3M cover tape.

Conclusion

- New Cover tape passed dimensional and functional test.
- Based on the PST comparison Advantek cover tape is more stable/compatible in terms of PST graph.

Recommendation

Based on the qualification performed on the proposed cover tape, we recommend to change the cover tape used

FROM:

Cover Tape: **3M- 2675 W5.4 L475 ANTI-STAT**

TO:

Cover Tape: **Advantek- HUC0054-500**

Using the recommended cover tape, we can lessen/eliminate the incompatibility of the carrier tape and cover tape.