



Adhesive, Film

1 Scope

1.1 Material Description. A form of pressure sensitive, adhesive dry film protected with a release liner. Constructions may include adhesive transfer films, and double coated tapes. The thickness of this material is sufficient to adhere satisfactorily to textured or uneven surfaces plus where some surface mismatch exists. It may be applied to painted surfaces, Kraft paper, various metals, plated surfaces, glass, rubber, foamed or cellular materials, fabrics, vinyl, polyethylene, polypropylene, thermoplastic olefin (TPO), polystyrene, acetals, and other low surface energy or difficult to bond plastics.

1.2 Symbols. Not applicable.

1.3 Applicability. Adhesive is utilized on various interior applications requiring a low fogging adhesive system.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ASTM D3330	ASTM D3654	TAPPI 411
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2.2 GM Standards/Specifications.

GMW3059	GMW14444	GMW16853
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3 Requirements

3.1 Requirements on Test Specimens. Material shall be tested as received (Table 1) and after aging material in the original container for 90 days @ 35 °C (Table 2).

3.1.1 Form and Quality.

3.1.1.1 Shelf Life. Material shall pass all requirements of this specification after aging material in the original container for 90 days @ 35 °C.

3.1.1.2 Packaging. Tape to be furnished in evenly and uniformly wound rolls, adhesive side in, on suitable cores with the silicone treated paper protective covering easily removable with no separation of material.

3.2 Emissions Testing of Interior Materials and Parts. For all Code E designated parts per GMW14444, reference GMW16853 for emissions testing of interior materials and parts.

Table 1: Material Properties as Received

Properties	Values	Test Methods
Color	Translucent	Visual inspection
Mass	0.06 kg/m ² to 0.20 kg/m ²	Weigh a 101 mm x 152 mm sample with liner removed to nearest milligram. Multiply result by 0.064583 to obtain result in kilograms per square meter (kg/m ²).
Solids Content	94.5% minimum	See Appendix A
Thickness of Adhesive	0.09 mm to 0.165 mm	TAPPI 411 with indicator foot 5 mm to 8 mm diameter, force of 50 g to 150 g. Teflon foot acceptable.
Adhesion to Steel	535 N•m width minimum	ASTM D3330 Method E with 15 minutes ± 5 minutes dwell of sample prior to peel.
Shear Adhesion (Low temperature value is assumed unless high temperature stated)	25 minutes @ 23 °C minimum low temperature 3000 minutes @ 23 °C minimum high temperature	ASTM D3654 Method A. Sample may dwell up to 72 h in controlled conditions prior to test to assure proper adhesion and promote shear failure. Adhesive test sample to be 12 mm x 25 mm ± 1 mm.
Liner Release	45 N•m width maximum	ASTM D3330 Method D

Table 2: Material Properties 90 Day Aged

Properties	Values	Test Methods
Color	Amber, Clear	Visual inspection
Mass	0.06 kg/m ² to 0.20 kg/m ²	Weigh a 101 mm x 152 mm sample with liner removed to nearest milligram. Multiply result by 0.064583 to obtain result in kilograms per square meter (kg/m ²).
Solids Content	94.5% minimum	See Appendix A
Thickness	0.09 mm to 0.175 mm	TAPPI 411 with indicator foot 5 mm to 8 mm diameter, force of 50 g to 150 g. Teflon foot acceptable.
Adhesion to Steel	420 N•m width minimum	ASTM D3330 Method E with 15 minutes ± 5 minutes dwell of sample prior to peel.
Shear Adhesion (Low temperature value is assumed unless high temperature stated)	25 minutes @ 23 °C minimum low temperature 3000 minutes @ 23 °C minimum high temperature	ASTM D3654 Method A. Sample may dwell up to 72 h in controlled conditions prior to test to assure proper adhesion and promote shear failure. Adhesive test sample to be 12 mm x 25 mm ± 1 mm.
Liner Release	45 N•m width maximum	ASTM D3330 Method D

4 Manufacturing Process

Not applicable.