

LED Strip Tape Selection Guide

Luminary Labs | 3M adhesive options for mounting flexible LED strip

Tape overview

	9495LE (300LSE)	F9469PC (VHB, no carrier)	5906 (VHB, foam carrier)
Construction	PET carrier, ~0.17 mm	Adhesive only, ~0.13 mm	Acrylic foam core, ~0.15 mm, black
Long-term temp	~93 °C	~149 °C	~121 °C
Min. application temp	21 °C+ ideal, not below 10 °C; fast initial tack	21 °C+ ideal, not below 10 °C; 72 h dwell	21 °C+ ideal, not below 10 °C; 72 h dwell
Key strengths	Widest substrate range incl. LSE plastics & powder coat; high initial tack; easy lamination; PET adds dielectric layer	Best heat resistance; best thermal path; VHB branded	VHB branded and bonds powder coat/paint; conformable foam; easier to handle than transfer tape
Key weaknesses	Not VHB; lowest temp rating; lower hot shear; PET adds slight stiffness	Poor on LSE / many powder coats; stretches & oozes in lamination; tacky edges; heavy residue on removal	Black only; most thermal resistance; no PET dielectric
Choose when	Widest substrate application is needed; thermals remain under 80 °C	Bare metal, hot fixture, or VHB required	Powder coat/paint and VHB required

Fixture material ranking (1 = best choice · NP = not published by 3M)

Fixture material / condition	Typical fixtures	9495LE peel, N/100 mm (180°, 72 h)	F9469PC peel, N/100 mm (180°)	5906 peel, N/100 mm (90°, 72 h)
Powder coat, smooth / high-energy	Troffers, linear housings, pendants	1 Best NP	3 OK NP	1 Best NP
Powder coat, textured / low-energy / unknown	Matte or textured housings, mixed suppliers	1 Best NP	3 OK NP	2 Good NP
Liquid-painted metal	Sign cabinets, painted enclosures	1 Best NP	3 OK NP	1 Best NP
Bare or anodized aluminum	Extrusions, channels, heat sinks	2 Good NP	1 Best NP	1 Best NP
Stainless / bare steel	Food service, retail, marine-style fixtures	2 Good 99 139 @ 90°	1 Best 140	1 Best 160
Polycarbonate / acrylic	Lenses, edge-lit panels, diffusers	1 Best 142 (PC)	2 Good NP	1 Best NP
ABS / rigid PVC	Plastic housings, channels, displays	1 Best 120 (ABS)	2 Good NP	1 Best NP
PP / PE	Low-cost plastic channels and covers	1 Best 137 (PP)	3 OK NP	3 OK NP
Hot fixtures (board > ~80 °C)	Enclosed / high-output linear	3 OK 73 @ 70 °C, 90°	1 Best NP	2 Good NP
Cool field installs (10–15 °C)	Retrofits, site-applied strip	1 Best 66 @ 15 min dwell	3 OK NP	3 OK NP

Note: Rankings are engineering guidance, not 3M specifications. Peel values are from 3M technical data sheets per ASTM D3330, at room temperature unless noted. NP = not published by 3M. Test angles differ between tapes (90° vs 180°), so values are not directly comparable across columns.