Adhesion of Dymax Conformal Coatings to Probimer Solder Masks

Solder masks are used by PC board manufacturers to create a complete protection for the circuit board. Adhesion of Dymax conformal coatings to these solder masks will vary depending on which conformal coating or which solder mask is used. Adhesion testing has been done with three different conformal coatings applied to nine different Probimer solder masks. The adhesion testing was done per ASTM D-3359-95, standard test methods for measuring adhesion by tape test (cross hatch adhesion). Test method B was used. Dymax conformal coatings were applied and UV cured in a thickness of 4 mils on each of the boards that were coated with the various Probimer solder masks. The results of this adhesion testing are listed in the table below.

Table 1.
ASTM D-3359-95 adhesion test results*

Solder Mask	Dymax 9001-E V3.0	Dymax 984-LVUF	Dymax 9-20557
Probimer 77 Blue	5B	5B	3B
Probimer 77 Black	4B	5B	4B
Probimer 77 MA (Curtain Coat)	0B	0B	0B
Probimer 77 Red	4B	5B	4B
Probimer 77 GL (Curtain Coat)	0B	0B	0B
Probimer 77 GL (Flood Screen Print)	2B	0B	3B
Probimer 77 MA (Flood Screen Print)	3B	0B	2B
Probimer 77 MA-1 (Curtain Coat)	0B	0B	0B
Probimer 77 Clear	3B	5B	3B

* The adhesion rating system is from 0B to 5B with a 0B rating having the worst adhesion and a 5B having the best adhesion.