



TECHNICAL ASSISTANCE

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MACtac Transfer Tapes for Nameplate and Faceplate Applications

Background:

A majority of nameplates/faceplates are made of plastic materials. Many of these plastics are clear and the printed decoration is applied to the under-side so that the decoration is ultimately viewed through the clear plastic. This “reverse” printing technique allows the plastic material to act as a protective layer for the ink. As a result, the ink layer cannot be scratched or marred by surface abrasion and it is also protected considerably from the effects of U.V. light exposure.

When using adhesive to mount or bond the nameplate/faceplate, the adhesive will be applied to the printed ink side. As a result, the adhesive must be compatible with the ink layer as well as the plastic material. The adhesive must bond well to the ink. There must not be a significant interaction between the ink and adhesive that would result in detrimental effects on either one.

Compatibility Test Procedure:

Nazdar 3478 ink (High Intensity White – UV Ink) was printed onto Lexan® polycarbonate using a 355 mesh screen. The ink was cured using a medium pressure mercury bulb with 134 mj/cm² of energy and an irradiance of 770 mw/cm².

One-inch wide strips of the printed polycarbonate were bonded to an aluminum surface using pressure sensitive transfer tape. The bonded samples were placed in a 140° F. oven overnight to allow the adhesive to make maximum contact with both the aluminum and ink surfaces. The samples were then allowed to cool before testing.

Two types of tests were conducted. The first was a 90-degree peel of the polycarbonate from the aluminum substrate using a crosshead speed of 12 i.p.m. The second more practical test was simply a forcible separation of the polycarbonate and aluminum followed by an inspection of the printed surface.

<u>Test Results:</u>	<u>Adhesive Product</u>	<u>90 Degree Peel Adhesion, lbs/inch</u>
	IF2012	3.8
	IF2015	6.7
	IF2092	5.1
	IF2095	9.6

Note: No ink delamination was observed in the 90-degree peel test or the forcible separation test.

Summary:

Based on the adhesion compatibility tests, MACtac IF2010 and IF2090 series acrylic transfer tapes should be compatible with the Nazdar 3400 ink series designed for use in the nameplate industry.

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