



TECHNICAL ASSISTANCE

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Version: 1
Approved: WEJ
Date: 02/2002

Bulletin

Performance Comparison of IF-2095 and 3M 950

PRODUCT CONSTRUCTION

Both IF-2095 and 3M 950 are 5 mil thick, modified acrylic pressure sensitive adhesives commonly referred to as transfer tapes or free films. They both were designed to have high initial tack and to bond well to low surface energy plastics. The relatively thick mass of adhesive permits more complete surface contact to textured, irregular or mismatched substrates.

COMPETITIVE COMPARISON

The comparative data listed below was obtained on commercially available products that were tested using standard industry procedures and practices. Although this comparative evaluation is based on a limited number of lots of each product, it does provide an interesting insight into the relative performance of each product.

COMPARATIVE DATA

	<u>TESTING</u>	<u>RESULTS</u>
	<u>IF-2095</u>	<u>3M 950</u>
Loop Tack, Lbs./ sq. in.		
Stainless Steel	9.8	7.5
ABS	12.8	8.1
HDPE	6.5	4.1
Peel Adhesion, Lbs./in.		
<u>30 minute residence</u>		
Stainless Steel	10.7	8.8
ABS	10.2	8.7
HDPE	8.5	2.8
<u>24 hour residence</u>		
Stainless Steel	10.4	8.2
ABS	10.0	8.3
HDPE	10.3	3.1
Shear Resistance, Minutes to fail		
Stainless Steel – 1000g @ 72° F.	15,000+	15.5
Stainless Steel – 1000g @ 150° F.	230	7.5
S.A.F.T., Failure temperature	186° F.	139° F.

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INTERPRETATION AND CONCLUSIONS

Based on the above data, the initial adhesion as measured by the Loop Tack method on both high energy surfaces (stainless steel), medium energy plastic surfaces (ABS) and low energy plastics (HDPE) clearly show that the IF-2095 consistently exceeds the 3M 950.

The peel adhesion of IF-2095 on all three of the above surfaces was superior both on a short-term basis (30 minute residence) and a longer-term basis (24 hour residence). It is of particular interest to note the much higher adhesion level for IF-2095 on the low energy HDPE surface.

The shear resistance of the IF-2095 at a normal room temperature of 72° F. far exceeded the shear of 3M 950. Also, the resistance to elevated temperatures as measured by the S.A.F.T. showed superior performance by the IF-2095.

The test data strongly suggest that the IF-2095 would provide better adhesion to most all substrates and in particular the low energy plastics. Better temperature resistance will permit its use in a much broader selection of applications.

RECOMMENDATION

Although the test results indicate that IF-2095 would perform at least equal and probably better in applications where 3M 950 is currently used or is being considered, it is always our recommendation that the customer evaluate the performance in the end application to insure acceptability.

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