

Silicone Based Absorber Adhesion Testing

TECHNICAL BULLETIN 105

90° PEEL AND STATIC SHEER ADHESION TESTING



Industrial Adhesives and Tapes Division 11 TSR 7152



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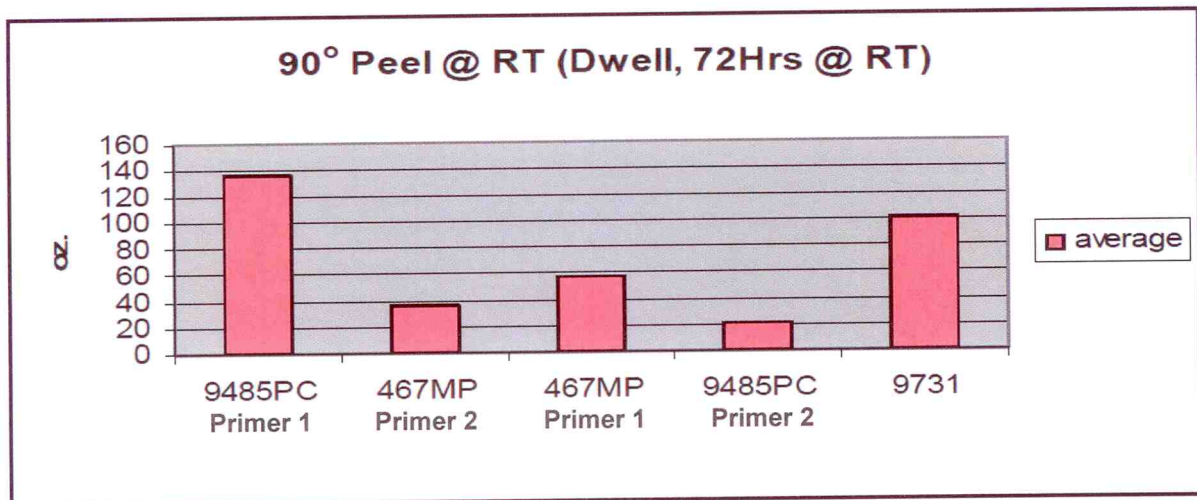
Customer Background:

Customer would like shear and peel adhesion testing to their primed silicone substrates. Products to evaluate are 467MP & 9485 with two different adhesion promoters, Primer 1 and Primer 2. Primed samples were prepared by the customer via typical application techniques unique to the customer.

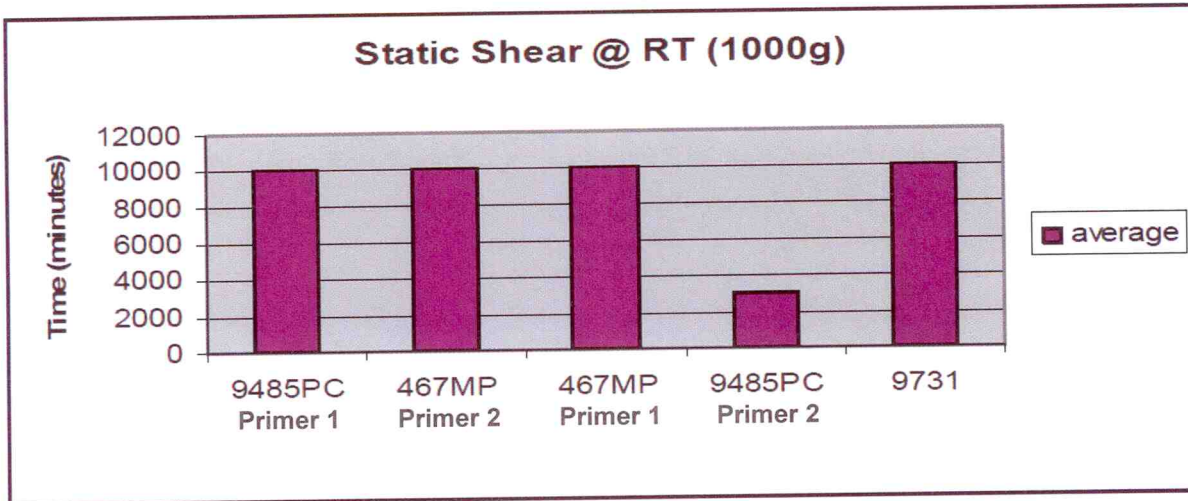
9731 was included in the testing as an alternative solution for use without primer.

Evaluation:

The following charts are indicators of the performance of the adhesive indicated in combination with the respective primer.



Peel testing indicates that 9485PC with the use of Primer 1 provides the highest level of peel according to the test performed. 9731 (selected due to its silicone/acrylic adhesive system, therefore, prepared without any primers), provided good results as well.



Static Shear testing as captured above, demonstrates that all combinations tested, with the exception of 9485PC prepared with Primer 2, yielded good shear results.

Conclusions:

As demonstrated in the Peel Testing, results indicate that 9485PC prepared with Primer 1 provide the best results. 9731 provides an alternate solution if the use of a primer is not desired. The results of the Static Shear testing, demonstrates the shear performance, further reinforcing these two products as the best candidates for further evaluation by the customer.

Since there are many other factors that can greatly affect a bond, many of which are unique to the customer's application, we strongly encourage our customers to test and evaluate each application under actual use and environmental conditions to assure the product will perform and function satisfactorily for its intended purpose and supply chain life-cycle.

I hope this information is useful and provides a solution for this application! Please contact 3M Tech service if you wish to further review this Technical Service Request.

Regards,

Bruce Wamstad
 Technical Service Engineer
 3M/Industrial Adhesives and Tapes Division