

Tack Tests on Adhesive Material

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Summary

A tack test is a common method for evaluating the adhesiveness of a material and to compare adhesiveness between materials.

Description of Tests

Tack tests were performed on two types of adhesives using two types of probes (the 7.9 mm diameter flat probe and a 25 mm diameter round probe). Compression TestProfiler Software was run on a 5567 test instrument for these tests.

The test parameters were:

- Load at 1.0 mm/sec to 450 g
- Withdraw at 0.5 mm/sec

The 7.9 mm probe was held down on a flat platen by a plate with a 9 mm hole for the probe and the 25 mm diameter ball was held down on a flat platen by a washer with a 22 mm inside diameter hole. Each piece was automatically preloaded to approximately 5 g before the data acquisition began. The maximum adhesion force was reported for all tests.

Conclusions

The tests demonstrate the ability of the system to produce repeatable and accurate data. High test speeds may cause some overshoot of the target load point; however, the software can be easily modified to include dwell time, which will alleviate problem.

Apparatus

- Model 5569: 50 kN test instrument with 100 N load cell
- TestProfiler software module
- 6 in compression platen
- 7.9 mm flat probe
- Upper part of ball burst fixture with 25 mm ball probe
- Hold down plates and washers