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Accessible material testing for all

At Lab Aces we share our materials (testing) knowledge to assist you with your materials challenges!

MATERIAL TESTING FOR PRODUCT MANUFACTURING

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Principle

Different material testing techniques are used to get a better understanding of your manufacturing processes or products. Whether it's: • Flowing or viscoelastic behaviour of the used fluids. • Curing speed of the adhesives at different temperatures. Thickness of layers after coating. • Surface morphology of parts after a specific manufacturing treatment. • Thermal-mechanical properties of materials after processing.

The combination between knowledge about material properties and testing techniques helps to understand and develop your manufacturing process and product.

Advantages

• Getting rid of trial and error process development. • Higher yield due to better understanding of the materials (constraints) used in your manufacturing process. Fast failure mode and defect analysis. • Lower costs due to testing on a component instead of testing the assembly.





Disadvantages

 Knowledge required about materials and testing techniques. • Drawing relationship between material property and effect on product. Purchase of expensive equipment and long lead times at external testing facilities.

Materials Testing, Training, Consultancy

Our core expertise are: Flowing behaviour (rheology) Mechanical testing Thermal analysis of polymers Surface characteristics Composition analysis

More information:



Production boundaries and limits

• Samples are often simplified or standardized samples (depends on test • Often test samples are small volumes. • Depending on the test, temperatures below 0 °C and above 80 °C are not uncommon.

Examples

• Determination of flowing properties of for example adhesives.



Cost

Very dependent of the test requirements, sample sizes, test time. But typically: If we perform the test for you: from €146 per material. • If you perform the test in our lab: starting from €97 per hour. • Trainings starting from €650.

• Glass transition of an adhesive after curing, parameters during cure in production define the mechanical properties of the adhesive.



 By following our training you can use the technology yourself! No need for external parties to interfere.





