

Surface & Sizing Tester

EST 12

Ultrasonic Tester

for the Determination of Converting Process Relevant
Surface Parameters of Paper and Board
via the Assessment of the Wetting & Absorption of Liquids



Simple, efficient and accurate surface testing of paper and board for

- Surface sizing / hydrophoby
- Surface porosity
- Coating quality / binder filming
- Surface starch content

Prediction of converting properties for

- Printability
- Glueability
- Coatability
- Dusting tendency

Main user

- Paper / board producers
- Paper / board converters
- Chemical suppliers
- Machine manufacturers

➔ **Prediction of converting problems which are not detectable with technical standard equipment.**

Features

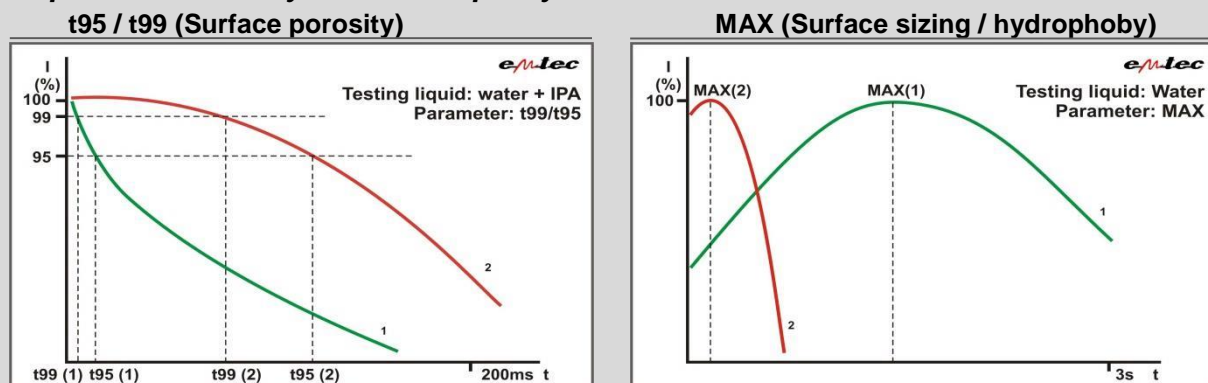
For an optimal runnability during the finishing or converting process of paper/board, certain specifications of the products are required to achieve an optimal result. Usually, these specifications are based on standard measurement methods (e.g. Cobb test, Bendtsen / Gurley porosimeter). Although these standard specifications are often met, converting problems often still occur. This is due to the fact that standard measuring devices frequently do not characterize the significant converting relevant paper parameters.

In order to predict converting problems reliably, one should know what to measure. Problems in the converting process can be due to non-optimal surface porosity (e.g. caused by too much or too less starch application in the size press or fiber quality/refining) or/and non-optimal surface sizing (e.g. caused by too much or too less hydrophobic agent in the size press).

The **EST12 Surface & Sizing Tester** and appropriate testing liquids help to characterize both, **surface porosity** and **surface sizing/hydrophoby**. The contact of the testing liquid with the sample surface is measured in the relevant time for the converting process, i.e. measurement is possible in the very first milliseconds (surface porosity) or seconds (surface sizing / hydrophoby).

By means of the analysis of relevant parameters, quality issues can be predicted and, thereby, immense **savings of material, man power, time, and money** can be realized. Complaints are avoided and the converting process stabilized, leading to a quick "return on investment".

Example: Automatically calculated quality values



Application area

Quality testing for internal- and surface-sized, uncoated respectively coated paper and board (grammages up to 600 g/m²)

Measuring results

Surface pore structure (t95 resp. t99)
Surface sizing (MAX)

Advantages

- **Portable** low cost unit
- Easy handling
- High-performance, very user-friendly PC software with automatic computation of application-specific parameters
- **Especially suitable for quality control directly in production plants and for use by application engineers of chemical suppliers for employment at customer, as well as for troubleshooting**

Technical data

Sample dimension: 75x50 mm
 Measuring frequencies: 1 MHz, 2 MHz selectable
 Device dimensions: 250x140x250 mm (H x W x D)
 Weight: approx. 4 kg / 8.8 lbs
 Supply voltage: 100-240 VAC, 50/60 Hz