emtec Innovative Testing Solutions

PDA MODULE MSC

STANDARD COATING

Evaluation of coating color and base paper interactions

ADVANTAGES

- evaluation of coating color and base paper interactions under the simulation of process conditions
- measurement of the
  - surface sizing
  - surface hydrophobia
  - surface porosity

  (in comparison to the MST, tests are also possible with coating color)
- prediction of coatingability of paper and board
- accurate, reliable and repeatable
- part of the modular system emtec PDA.C02

USERS

- chemical suppliers
- paper & board producers and converters
- pigment producers
- universities and institutes

The module Standard Coating is especially made for tests with coating color, using the ultrasonic measuring principle. The module Standard Coating (MSC) allows the characterization of the reaction between coating color and paper or board surfaces.

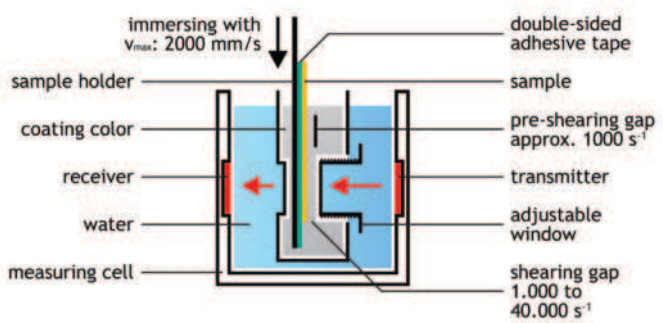
BASIC

The PDA.C 02 MST Coating & CMA Coating Measurement Accessories enable the detection of differences in coating colors, base papers, and coated papers, which can lead to issues with the converting quality or quality of the finished product. With standard tests, these issues cannot be detected. The contact between coating color and base paper happens under high shear and pressure pulse, which leads to a good simulation of the coating machine applicator.

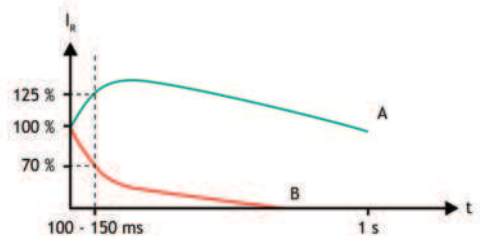
MSC | MODULE STANDARD COATING

MEASURING PRINCIPLE

A base paper sample is fixed on a sample holder and brought into an adjustable measuring gap filled with coating color. This causes dynamic contact between coating color and base paper, as well as a high shear and pressure impulse. As the sample reaches its final position, high frequency ultrasound is transmitted through the paper in z-direction. The liquid, penetrating into the paper, alters the paper's ultrasound transmission in a characteristic manner. This ultrasound alteration is recorded as an intensity-time diagram, using a PC.



MEASURING RESULTS



LWC – Offset Coating color A and B in contact with coating base paper (Example)

APPLICATION AREAS

r&d

process optimization

product optimization

troubleshooting

complaint management

benchmarking

MATERIALS

Paper, board and coating color

TECHNICAL DATA

basic device dimensions	42 x 16 x 32 cm (H x W x D)
MCU device dimensions	11 x 16 x 24 cm (H x W x D)
device weight	approx. 19 kg
power supply	115 - 230 VAC, 50 - 60 Hz
sample dimension	approx. 75 x 50 mm
measuring frequency	1 MHz, 2MHz
data structure	ASCII file

SPECIAL ACCESSORIES FOR COATING COLOR TESTS

CDM Coating Color Deaeration and Mixing System

CDA Coating Color Deaeration System

SOFTWARE

Emtec Measurement System EMS

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