

RHEOLASER COATING



IDENTIFY COATING FORMATION MECHANISMS

evaporation, drying, curing, cross linking



MULTI PARAMETER ANALYSIS

Optimize curing & drying process:
Time & temperature, formulation optimization, different substrates



TEST MATERIALS UNDER REAL CONDITIONS

- Non-invasive, non-contact method
- Temperature range: **RT - 250°C**
- Multilayer analysis on any substrate

CURING MONITORING & COATING FORMATION
AT HIGH TEMPERATURES (RT TO 250°C)

MICRORHEOLOGY

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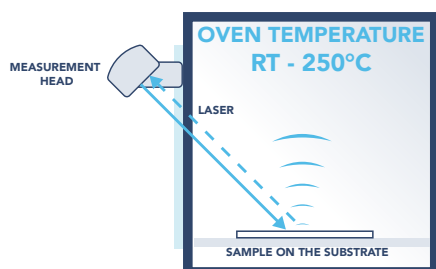
Formulation 
Smart scientific analysis

OPTICAL CHARACTERIZATION OF FILMS & MATERIALS

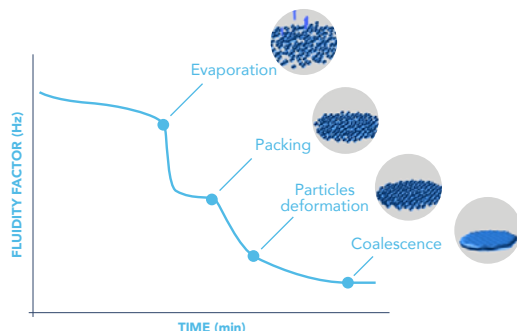
Rheolaser^{COATING} enables the monitoring of microstructure changes during the curing and drying process. Based on diffusing wave spectroscopy (DWS), it identifies the drying & curing mechanisms (evaporation, packing, hardening) and characteristic times (drying time, cured time). Thanks to laser technology, the measurement is non-invasive and works on any type of substrate. Operating temperature of the new module ranges from **RT up to 250 °C**.



MEASUREMENT PRINCIPLE



Rheolaser^{COATING} is based on Multi Speckle Diffusing Wave Spectroscopy (MS-DWS) and detects particle Brownian motion, also known as particle mobility. During the film formation or curing process, particle mobility decreases due to the change in the structure from heterogeneous liquid to uniform dried/cured material. A thorough analysis of the particle mobility (monitored by detecting wave interferences) provides a full reading of the drying mechanisms and drying times: evaporation, packing, polymerization, curing...



KEY BENEFITS

NON-CONTACT FILM FORMATION ANALYSIS

Film formation monitoring to optimize process and formulation

- Drying mechanism
- Drying and curing times

REAL TESTING CONDITIONS

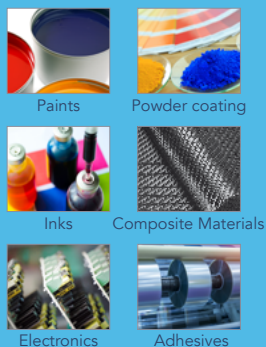
The instrument provides temperature control from RT to 250 °C to simulate the path of the coating into heating chambers. It works with **any coating and material type, substrate, thickness**, and with **multilayer systems**.

SIMPLE EXPERIMENTAL SET-UP

Place the substrate with the coating inside the instrument and click on start.



APPLICATIONS



TECHNICAL SPECIFICATIONS

Technology	Non-invasive MS-DWS
Wavelength	650 nm
Applied thickness	µm - mm
Temperature range	RT - 250 °C
Measurement time	Minutes to Days
Substrates	Glass, Metal, Ceramic, Polymer...
Sample Nature	Liquid, Solid
Dimensions	585 x 704 x 434 mm
Weight	55 Kg