



The NEXT STEP™ in Dispersion Analysis
& Materials Testing



Adhesion Analyser

LUMiFrac®



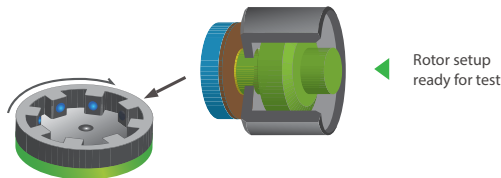
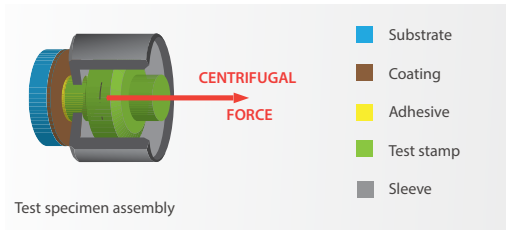
CAT-Technology™: The new standard in adhesion testing.



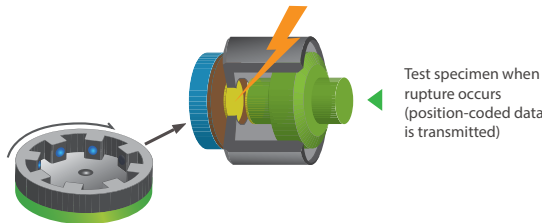
Adhesive & bonding strengths | Coating & surface properties

LUMiFrac[®] uses

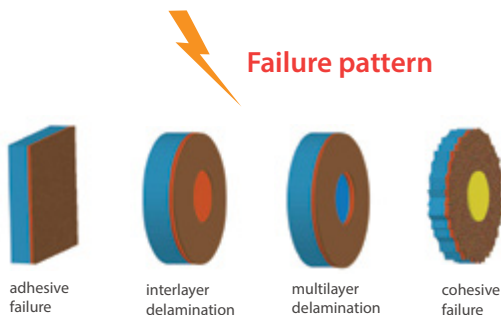
CAT Technology[®]



The centrifugal force is applied to the test specimen due to rotation. Detachment of test stamp (moment of rupture) is automatically detected.



A position-coded IR-signal and the current rotor speed are transmitted. The breaking load and tensile strength are calculated by SEPView[®].



The LUMiFrac is an innovative adhesion analyser, which employs centrifugal forces to determine temperature-controlled tensile as well as shear strength as an absolute physical quantity in N/mm^2 .

Test sample positioning is as simple as 1-2-3. No clamping or special precautions are needed. The unique multisample approach of testing eight samples simultaneously results in an unparalleled accuracy and reduces measuring time by 85%.

The LUMiFrac accomplishes this by directly applying an incrementally increasing centrifugal force to the specimen being tested. It determines with high resolution the RPM at the moment of fracturing (employing CATT = Centrifugal Adhesion Testing Technology).

All data is transmitted to the well-known and popular operating software SEPView, which automatically calculates and displays the critical force/strength of failure in real time.

Application areas include lacquer, coatings, aircraft industries, joint wood products, composite materials in automotive and adhesive tapes, multilayer foils for packaging or thin metal films on plastics, electronics, sealings and optical coatings, e.g., eyeglasses, mirrors and many more.

- Easy & quick preparation of your test specimen
- 8 samples analysed under identical conditions
- No sample clamping at all - simply insert and start
- Wide range of test forces (0.1 N up to 6.5 kN)
- Test specimen for determination of tensile and shear strength
- Variable testing speeds, flexible load cycling
- Temperature-controlled $-11^{\circ}C$ to $+40^{\circ}C$
- Cost-saving multi-use of test stamps
- Characterization of surface-treatments
- Meets ISO 4624, DIN EN 15870, JIS K 5600-5-7 and DIN EN 14869-2.

Use & benefits

runs on



SEPView®

- ▶ Client-Server: Simultaneous multi user access, better collaboration, secure multi device access
- ▶ Modern Web Interface for SEPView Explorer:
 - Easy to use
 - Device-independent: can be used on computers, notebooks, tablets, smart phones
- ▶ Full SOP concept (Creation, capture, data analysis, report, data exchange)
- ▶ Save failure pattern images with analysis data
- ▶ Comprehensive database security and full audit-log



Applications

- ▶ Standardised short time measurements for QC, testing of tensile and shear strength of bonded joints:
 - Cyanoacrylates, epoxy adhesives, polyurethanes, adhesive tapes, sealings...
- ▶ Determination of adhesive strength of coatings:
 - Anti-corrosion coatings, decorative coatings, metallized polymers, optical coatings...
- ▶ Composites:
 - multiple material compounds, interconnections, lightweight construction...
- ▶ Surface treatment
- ▶ Long-term fatigue testing:
 - Alternating loads, different temperatures



Specifications

no
clamping
needed

Load range	0.1 N–6.5 kN
Tensile strength	up to 80 MPa
Measurement time	1 min up to 99 h, depending on task and objective
Conformity	ISO 4624; JIS K 5600-5-7; DIN EN 15870; DIN EN 14869-2

Samples	up to 8 simultaneously
Sample dimension	max. 30 mm x 30 mm x >1 mm
Adherent area	diameter 7 mm, 10 mm and customized
Test stamp material	metal or non-metal
Test stamp weight	4.1 g - 38.7 g (W/Cu up to ca. 58 g)

Dimensions (W x H x D)	38 x 29.6 x 64 cm ³
Weight	56 kg, desktop
Rotor speed	100–13,000 rpm
Temperature control	–11°C to +40 °C
Data interface	USB
Power supply	100 V, 120 V, 230 V; 50/60 Hz
Power consumption	max. 1050 W



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