CHEMOTRONIC Cool HighVisc option

Automatic turbidity analysis of high viscosity media

- quality testing of solvent-based resins for adhesives
- quality testing of high viscosity EVA-based hot melts
- solution for better adhesion to difficult substrates
- solution to improve the speed of in line coatings on gravure printing machines
- automatic test method for use in adhesives technology research

The CHEMOTRONIC Cool HighVisc option has been developed for demanding applications in testing high viscosity media such as high solid binders,resins for adhesives, hot melts, sealants etc. It improves efficiency and accuracy in production control and quality assurance.

Features

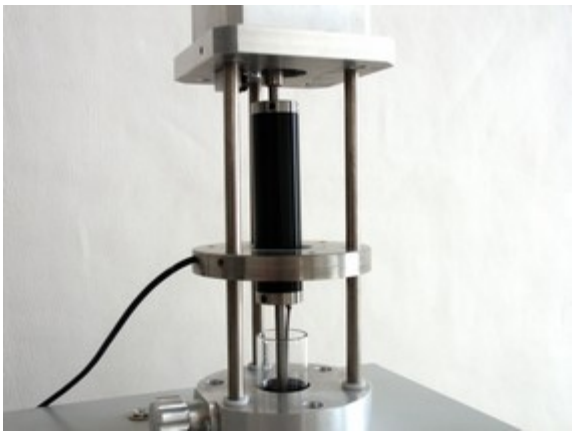
- exact cloudpoint determination of high viscosity resin systems
- accurate phase transition tests of ethylvinylacetate (EVA) with tackifiers
- wide temperature measurement range from -60 up to +250°C
- motor driven dual helix spindle for homogenic distribution in the test tube
- easy-to-use testing and maintenance free
- wireless energy and temperature signal transfer

Typical applications

- solvent-based binders
- EVA-based hot melts
- high solid varnishes
- waxes and sealants
- media for laminations and labelling
- media foraut omatc p ackaging
- media for primer coatings

Dual helix spindle

Special dual helix spindle with motor drive provides optimal homogenity of high viscosity samples. A Pt1000 platinum resistance probe is also immersed into the sample for accurate temperature measurement. Wireless signal transmission by optical transfer is used to transfer the measured signal from the Pt1000 temperature sensor to the instrument.



Test procedure

The test tube is filled with 20 grams of particles of solid media and heated up to the melting point. Then the spinde is inserted into the test tube which is then placed into the instrument. The motor drive assembly is connected to the hex coupling on top of the shaft and placed on top of the instrument. The test tube is mounted by the knurled knob. The connectors of the electrical cables are mounted to the sockets on the rear panel. After that the test program is selected and the actual test can be started. At the end of the test a record is printed out on the data printer automatically.

Principles of operation

The integrated electronics of dual helix spindle is supplied with electrical energy from outside by means of an electromagnetic field. This makes the use of batteries obsolete. The electronics converts the temperature signal to a digital signal by own references. When converted the signal is sent out immediately to the spindle driving unit for further use within the CHEMOTRONIC Cool.

The stirring force is limited by electronics. This protects the glass test tube in case of prompt spindle blockage.

The dual helix spindle interrupts periodically the IR beam. An automatic synchronization algorithm for spindle position and IR beam grants exact turbidity measurement.

Technical Specification

Temperaturemeasurementange	-60 ... +250°C
Temperatureaccuracy	± 0.1°C
Stirringspeedrange	15 ... 180 rpm
MaximalViscosity	30.000 cP
Automaticpositionsynchronization	integrated in Chemotronic Cool
Numberofdualhelixspindles	2
Weight	3 kgs

NOVOMATICS GmbH
Aubachstr. 1
D-56410 Montabaur/Germany

Phone: ++49-2602-919 9622
Fax: ++49-2602/919 8052
Email: solutions@novomatics.com