UV curing cell for HAAKE rheometers

For the HAAKE rheometers, UV curing cells have been developed for measurement of the sample's rheological properties before, during and after controlled exposure of the sample to UV radiation (Fig. 1).

The UV curing cell described here can be mounted on a temperature control unit (liquid, electrical or Peltier plate) with a bayonet coupling (quick fit). The cell is made of stainless steel with an exchangeable quartz glass plate (Fig. 2) which is serving as lower part of a plate/plate measuring geometry (Fig. 3).

Any UV light source can be connected via light guide (outer diameter up to 14 mm) as shown in Fig. 3.

The UV light source should be capable of providing different intensities in order to measure the dependence of the curing behaviour as a function of the light intensity applied (Fig. 1). Moreover, the light source should be equipped with a timer, a manual control switch or a foot-operated switch as well as a trigger input facilitating control of the light source via the measuring software of the rheometer.

Plate/plate measuring geometries with diameters up to 20 mm and from various materials (e.g. titanium, stainless steel or aluminium as disposable version) are available.

Key-words

- HAAKE MARS
- HAAKE RheoStress
- UV curing
- Measuring plate cover
- Light source

Ordering Information:

222-1535 UV curing cell for HAAKE Series 1 temperature control units as well as Peltier temperature control unit for HAAKE RheoStress 600 and MARS
222-1536 UV curing cell for liquid and electrical temperature control units for HAAKE RheoStress 600 and MARS

Required accessories:

- Temperature control unit to mount the UV measuring cell on
- UV light source and light guide
  (e.g. HP120 of Dr. Gröbel UV-Elektronik GmbH, www.uv-groebel.de)
- measuring geometry, e.g.:
  222-1375 Upper holder with ceramic shaft for disposable measuring geometries
  222-1295 Disposable upper measuring plates PP20E (100 pcs., D = 20 mm, aluminium) or
  222-0586 Plate PP20 Ti (D = 20 mm, titanium)

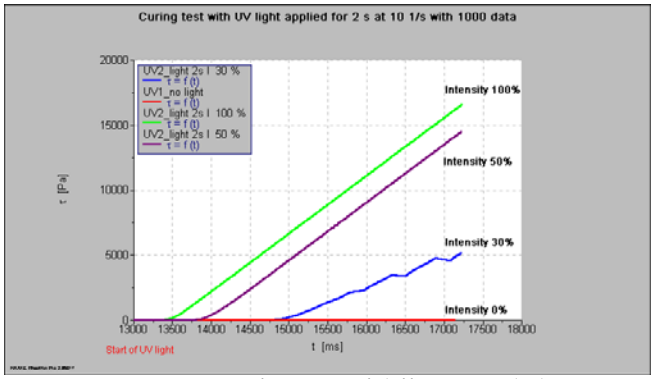

Fig. 1: Curing curves as function of different UV light intensities

Fig. 2

Fig. 3

Fig. 2: Scope of delivery for UV measuring cell 222-1536
Fig. 3: HAAKE MARS with mounted UV measuring cell, plate PP20 in measuring position and mounted UV light guide

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