



UV curing cell for an individual arrangement of optical components

In order to measure a given sample's rheological properties before, during and after controlled exposure to UV radiation, a cylindrical UV curing cell has been developed for the HAAKE MARS, HAAKE RheoStress 6000 rheometers and the respective predecessor models.

The cylindrical UV curing cell has an outer diameter of 48 mm and fits into fluid or electrically controlled cylindrical temperature control units. The cell is made of aluminium with an exchangeable quartz glass plate which serves as lower part of a plate/plate measuring geometry.

Thanks to spacers and the thread inside the UV curing cell, optical components, for example a condensing lens, can be individually positioned with freely configurable distances. This design allows the rheometer with the optical components to precisely simulate the conditions in the production process.

Through the helical groove on the outer surface of the UV curing cell a (purge) gas stream can be temperature controlled and pipelined to the sample.

Any UV light source can be connected via light guide (outer diameter 24.5 mm). 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. 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 rheometer's measuring software.

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. Rotors with a glass plate are also available.

Key-words

- HAAKE MARS
- HAAKE RheoStress
- UV curing
- Light source

Ordering Information:

603-0043 UV curing cell for HAAKE MARS, HAAKE RheoStress 6000 and predecessor models, consisting of inner part with spacers for individual arrangement of optical components and a glass plate as a lower measuring geometry

Required accessories:

- Cylindrical temperature control unit fluid TEF/Z48 or electrical TEF/Z48
- UV light source and light guide
(e.g. HP120 from 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 plate PP20E (100 pcs. D = 20 mm, aluminium)
222-0586 Plate PP20 Ti (D = 20 mm, titanium)
603-0177 Plate PP20 Ti (D = 20 mm, with glass plate)



Fig. 1



Fig. 2

Fig. 1: Schematic illustration of UV curing cell 603-0043

Fig. 2: UV curing cell 603-0043 with light guide and glass plate

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