

APPLICATION SHEET

Inorganics · Chemistry
LFA 467 HyperFlash®

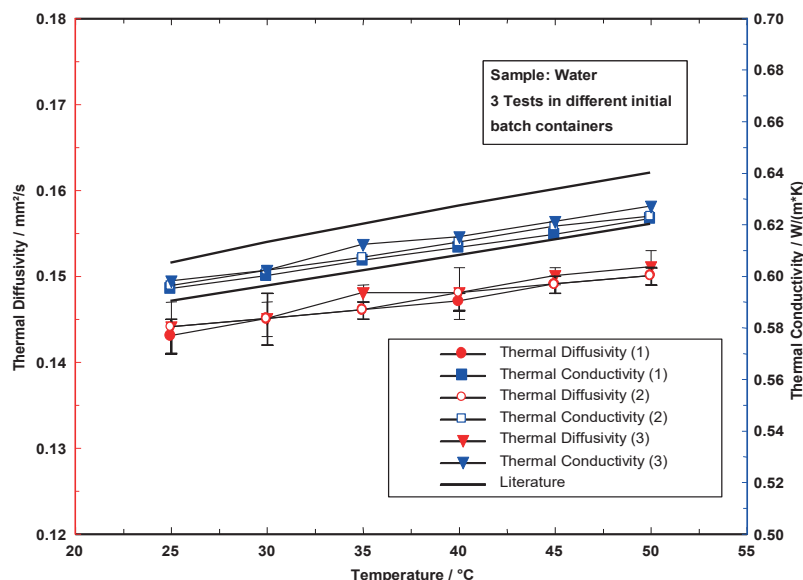


Water

Introduction

The measurement of the thermophysical properties of liquids is generally not an easy job for non-stationary testing methods. The problem one is facing is the influence of convective heat transfer which can strongly influence the measurement results. Convective heat transfer not

only depends on the characteristics of the material itself, such as the viscosity, but also on the surrounding conditions. To overcome problems resulting from convection, a new sample holder was designed for the LFA 467. The system is designed so that convective influences on the measurement results are avoided even in case of low-viscosity liquids.



Test Conditions

Temperature range: RT ... 50°C
Sample holder: for liquids and pastes
Sample thickness: approx. 0.49 mm
Sample surface preparation: -
 c_p from DSC, standard: -

Test Results

Water was measured several times with the LFA 467. The measurement results are in perfect agreement with the values typically found in literature for this liquid. The differences between the individual results and the difference compared to literature (average value) are less than 2.5% over the entire temperature range. Similar measurements had also already been carried out in the container on polymer melts and paste materials.