

**Measurement and Correlation of the Thermal Conductivity of  
1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc)**

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Measurements of the thermal conductivity of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) are reported in the vapor, liquid, and supercritical phases at temperatures from 160 K to 500 K with pressures up to 70 MPa. The properties of RE347mcc make it a good candidate for a working fluid for refrigeration and Organic Rankine Cycle (ORC) power generation as well as a low-temperature heat-transfer fluid. The measurements were made with two hot-wire apparatus with platinum wires of 12.7 mm diameter. The measurements were made with the steady-state technique for gas at pressures below 1 MPa, while the transient technique was used for liquid and supercritical gas at pressures above 1 MPa. The low-temperature apparatus was used at temperatures from 220 K to 340 K, while the high-temperature apparatus was used at temperatures above 300 K. The thermal conductivity data in the critical region show contributions from the thermal conductivity critical enhancement. The critical enhancement for the thermal conductivity of this fluid is consistent with mode-coupling theory that indicates the thermal conductivity of a pure fluid is divergent at the critical point. A wide-range correlation for the thermal conductivity of RE347mcc is developed based on this data.