

Thermodynamics of EuCl_3 : Experimental Enthalpy of Fusion and Heat Capacity and Estimation of Thermodynamic Functions up to 1300 K

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The heat capacity of solid EuCl_3 was measured by differential scanning calorimetry from 300 K up to the melting temperature, and beyond. These results were compared with literature data and fitted by a polynomial temperature dependence. The enthalpy of EuCl_3 fusion was measured. Furthermore, by combination of these results with literature data on the entropy at 298.15 K, $S_m^0(\text{EuCl}_3, \text{s}, 298.15 \text{ K})$ and the standard molar enthalpy of formation of $\Delta_{\text{form}} H_m^0(\text{EuCl}_3, \text{s}, 298.15 \text{ K})$, the thermodynamic functions have been calculated up to 1300 K.

Key words: Europium Chloride; Heat Capacity; Differential Scanning Calorimetry.