

Solid-Liquid Equilibria for Binary Systems of Natural Refrigerants and HFC's

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A recently built experimental set-up was employed for the estimation of the SLE of following binary systems: R744 + R744A, R744 + R32, R744A + R32, R744 + R125, R744A + R125, R744 + R134a, R744A + R134a, R744 + R143a, R744A + R143a, R744 + R152a, R744A + R152a, R744 + R23, and R744A + R23. The measurements were performed down to temperatures of about 115 K. The triple points of the pure fluids contained in the mixture were measured to check the reliability of the apparatus, revealing a generally good consistency with the literature. The results obtained for the mixtures were interpreted by means of the Schröder equation. In addition, because a constant cooling rate was not guaranteed by our experimental method, the results of the temperature data acquisitions were corrected using the Rossini method.