

## Thermophysical Properties Measurements for the Binary and Ternary Mixtures Composed of HFOs

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Measurements of thermophysical properties, that is,  $P\rho T$  (pressure - density - temperature) properties, saturated properties, and the critical locus, for several binary and ternary refrigerant mixtures composed of HFOs were made. Our target binary mixtures are the HFO + HFC mixtures, R 32 + R 1234yf, R 32 + R 1234ze(E), R 1234yf + R 1234ze(E), R 134a + R 1234yf, and R 134a + R 1234ze(E). And for ternary mixtures, R 32 + R 1234yf + R 1234ze(E) and R 134a + R 1234yf + R 1234ze(E) were selected. The experimental results were compared with calculations from REFPROP and the mixing parameters for these mixtures were optimized. In addition, the composition dependence of the critical parameters for these mixtures was also discussed.