

Study of the influence of alcohols addition to gasoline on the distillation curve, and vapor pressure

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Abstract. The properties of gasoline change as a result of blending with an alcohol. The aim of this paper is to report new experimental data on distillation curve and Reid vapor pressure of pseudo-binary blends of a catalytic reforming gasoline with ethanol, *i*-propanol and *n*-butanol, respectively. Gasoline blend with ethanol was used as reference for discussing properties of isopropanol and respectively, *n*-butanol blends with gasoline. The main conclusion is that alcohol addition to gasoline affects the relevant characteristics of the blend that influence engine operation. Gasoline+*i*-propanol blends have intermediate behavior between gasoline+ethanol and gasoline+*n*-butanol blends.

Keywords: gasoline, bioalcohol, distillation curve, Reid vapor pressure, volatility.

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