

## New Data, Reference Data and Reference Correlations for [C<sub>6</sub>mim][CF<sub>3</sub>SO<sub>2</sub>]<sub>2</sub>N]

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This paper reports new results obtained with the sample of [C<sub>6</sub>mim][CF<sub>3</sub>SO<sub>2</sub>]<sub>2</sub>N synthesized in the IUPAC project (IUPAC Project 2002-005-1-100 (Thermodynamics of ionic liquids, ionic liquid mixtures, and the development of standardized systems) [1,2], namely on density, speed of sound, surface tension and refractive index, as well as thermal conductivity of a commercial sample, at  $P = 0.1$  MPa, as a function of temperature. Reference data and reference data correlations for the density, speed of sound, heat capacity, surface tension, viscosity, electrical conductivity, thermal conductivity, refractive index, ion self-diffusion coefficient and melting temperature of this ionic liquid, at  $P = 0.1$  MPa, as a function of temperature, using these and other data reported in the literature up to July 2020. Rheological measurements demonstrated that this ionic liquid is Newtonian. Complete results were recently published [3].

### References

- [1] – K.N. Marsh, J.F. Brennecke, R.D. Chirico, M. Frenkel, A. Heintz, J.W. Magee, C.J. Peters, L.P.N. Rebelo, K.R. Seddon, “Thermodynamic and thermophysical properties of the reference ionic liquid: 1-hexyl-3-methylimidazolium bis(trifluoromethyl)sulfonyl amide (including mixtures) Part 1. Experimental methods and results (IUPAC Technical Report)”, *Pure and Appl. Chem.* 81, 781 (2009). DOI: <https://doi.org/10.1351/PAC-REP-08-09-21>
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