

Abstract Submitted
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Bulk Viscosities of Low-Pressure Gases¹ MARK CRAMER, Virginia Polytechnic Institute and State University — We provide estimates of the bulk viscosity of ideal gases using Tisza's formula and published values of the rotational and vibrational relaxation times. It is shown that, unlike the shear viscosities, the bulk viscosities take on a wide variety of numerical values and temperature variations. Common fluids having bulk viscosities which are hundreds to thousands of times larger than their shear viscosities are identified. We argue that the temperature variation of the bulk viscosity of many fluids will have a local maximum.

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Mark Cramer
Virginia Polytechnic Institute and State University

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