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(54) Title: IONIC LIQUIDS AS LUBRICATING OIL BASE STOCKS, COBASE STOCKS AND MULTIFUNCTIONAL FUNCTIONAL FLUIDS

Fig. 1

Ionic Liquid of Example No.	Kinematic Viscosity at 100°C (Kv ₁₀₀) cSt	Kinematic Viscosity at 40°C (Kv ₄₀) cSt	Viscosity Index (VI)
2	136	3792	114
3	88	1548	130
4	163	1750	210
5	Wax		
7	135	4010	109
8	87.2	1800	116
mPAO150	156	1705	205

(57) Abstract: A composition including an ionic liquid alkylammonium salt (e.g., tetraalkylammonium cation and bis(2-ethylhexyl) phosphate anion), or an ionic liquid imidazolium salt (e.g., 1,3-dialkylimidazolium cation and bis(2-ethylhexyl) phosphate anion), that have a structure sufficient to exhibit at least partial solubility in one or more Group I-V base stocks. The disclosure also relates to a lubricating oil base stock and lubricating oil containing the composition, a multifunctional functional fluid containing the composition, and a method for improving solubility of an ionic liquid in a lubricating oil by using as the lubricating oil a formulated oil including a lubricating oil base stock as a major component, and an ionic liquid alkylammonium salt cobase stock, or an ionic liquid imidazolium salt cobase stock, as a minor component.