

Title (en)
Electrorheological fluid

Title (de)
Elektorrheologische Flüssigkeit

Title (fr)
Fluide électrorhéologique

Publication
EP 0636683 B1 20050504 (EN)

Application
EP 94304455 A 19940620

Priority
JP 18952993 A 19930730

Abstract (en)
[origin: EP0636683A1] An electrorheological fluid comprising a disperse phase formed of dielectric particles and a dispersion medium formed of an electrical insulating oil and characterized by exhibiting a viscosity of not more than 0.2 Pa.s at a shear rate of 33/s when measured at 25 DEG C in the absence of supply of an electric field and a structural viscosity satisfying the condition of the formula (1): $0.01 \text{ Pa.s} \leq \eta_1 - \eta_2 \leq 0.5 \text{ Pa.s}$ ($\eta_1 >$ wherein η_1 is the viscosity in at a shear rate of 3.3/s when measured at 25 DEG C in the absence of supply of an electric field and η_2 is the viscosity in at a shear rate of 33/s when measured at 25 DEG C in the absence of supply of an electric field. This electrorheological fluid generates a large shear stress, exhibits an excellent current property and an excellent durability, and excels particularly in dispersion stability, redispersibility and fluidity.

IPC 1-7
C10M 171/00; C08F 30/08

IPC 8 full level
C10M 171/00 (2006.01)

CPC (source: EP)
C10M 171/001 (2013.01)

Cited by
EP0661379A1; US6096235A; US10961482B2

Designated contracting state (EPC)
DE GB

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EP 0636683 A1 19950201; **EP 0636683 B1 20050504**; DE 69434355 D1 20050609; DE 69434355 T2 20060309

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