

Title (en)
ELECTROVISCOUS ELECTRICALLY INSULATING FLUIDS

Publication
EP 0395359 B1 19930922 (EN)

Application
EP 90304402 A 19900424

Priority
JP 10699789 A 19890426

Abstract (en)
[origin: EP0395359A1] In an electrically insulating liquid medium there are mixed (a) 0.1 - 50 wt% of dispersed solid particles of size 10 nm - 200 μ m (e.g. silica gel), (b) 0.1 - 5 wt% of an acid, base or salt, (c) a polyhydric alcohol (e.g. ethylene glycol) and (d) an antioxidant (e.g. 0.01 - 10 wt % of a phenol or amine) which prevents oxidation of the liquid and the alcohol and/or a corrosion inhibitor (e.g. 0.001 - 10 wt% of a benzotriazole derivative or imidazole) which prevents corrosion of the electrode and generation of metallic ions. Optionally an agent to assist dispersing of the solid particles is included (e.g. a sulphonate or phosphonate). The resultant electroviscous fluid can have good effects, including responsiveness and reproducibility and durability when used at temperatures up to 100 DEG C and can be used in electrical control of mechanical devices by utilizing its viscosity change.

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IPC 8 full level
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CPC (source: EP)
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US 2751352 A 19560619 - BONDI ARNOLD A

Cited by
US5558811A; US5437806A; EP0671460A4; US5435932A; US5595680A; US5387370A; EP0567649A4; WO03048281A1; WO9307243A1; WO9307244A1; WO9313187A1

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