

"Suppliers of Magnetic Fluids for Research and Industry" Magnetorheological Fluids

Magneto-rheological fluids are stable suspensions of magnetically polarisable micron sized particles suspended in a low volatility carrier fluid, usually a synthetic hydrocarbon. Liquids Research Limited produce magneto-rheological fluids that are capable of giving high shear stresses at low applied magnetic fields. The unique nature of this class of magnetic fluid allows dramatic changes in rheology to occur within the bulk of the fluid on application of a relatively modest magnetic field. The material can change from being fluid to solid almost instantaneously, the rheology of the material reverting to its original state upon removal of the field.

Liquids Research Limited produce thixotropic and non thixotropic magneto-rheological fluids that are suitable for applications where high shear stresses are required, these applications include seat suspensions, vehicle suspension systems and exercise equipment. We are happy to accept speculative enquiries about the range of materials and expertise available in our company.

Standard Fluids

Fluid No.	% Particle packing (wt)	Carrier oil type
MRHCCS4-A	70	hydrocarbon
MRHCCS4-B	80	hydrocarbon

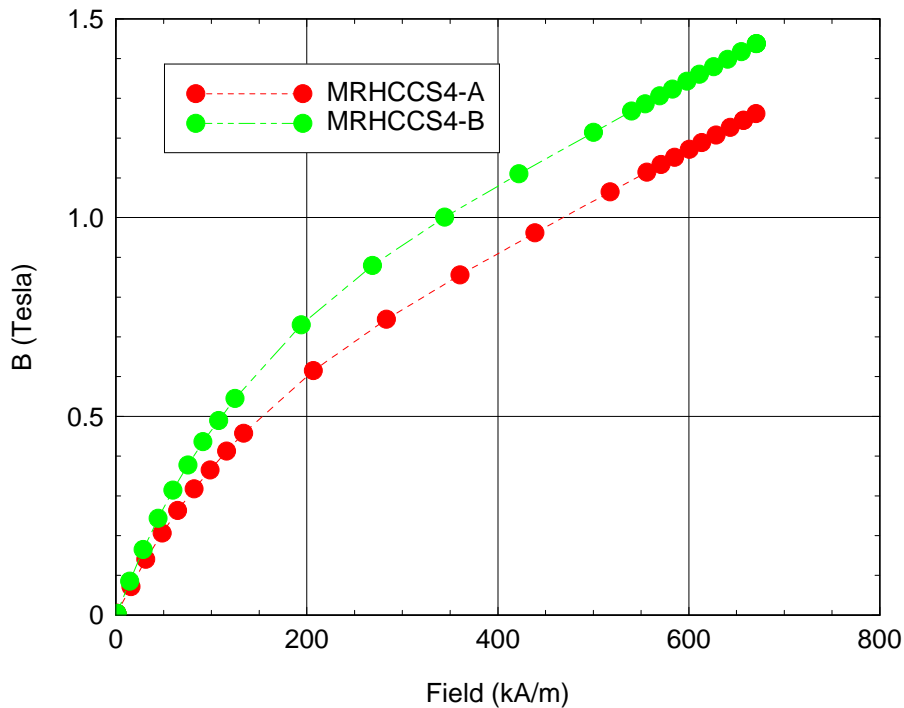
Health and Safety

Magneto-rheological fluids are not classed as hazardous materials. Normal industrial health and safety procedures should be practised when handling any magneto-rheological fluid. Rubber or latex gloves and goggles should be worn. In case of contact with skin the affected area should be washed with mild soap and water. In case of eye contact, the eyes should be flushed with plenty of clean water for 15 minutes. All our magneto-rheological fluids are supplied with a safety sheet.

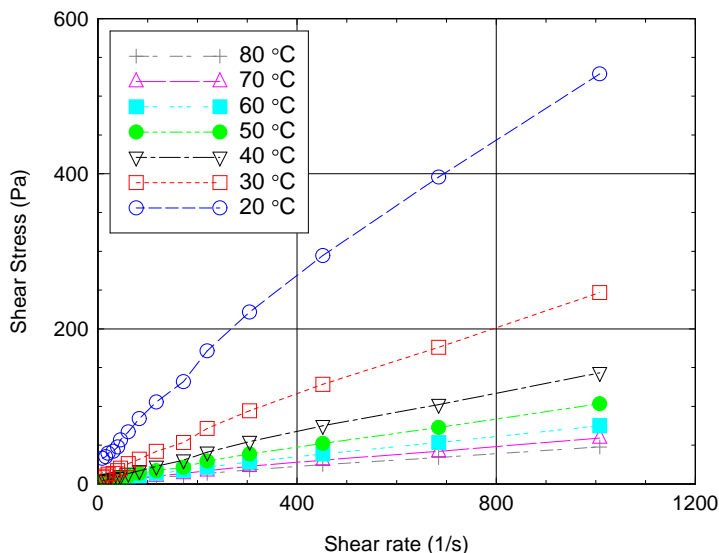
Properties	Value
Operating Temperature	-40°C to 140°C
Density	2.49 g/cc (A) 3.08 g/cc (B)
Colour	Grey
Packing fraction by weight	70% (A), 80% (B)
Flash point	> 190°C (A and B)
Rheology	See data on next page

Key Features

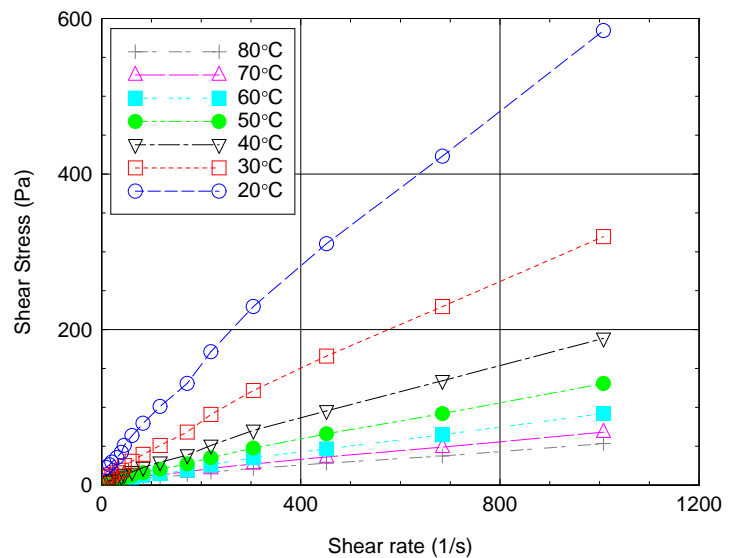
- ❑ Low off-state viscosity
- ❑ Low sedimentation
- ❑ Rapid response (milliseconds)
- ❑ Wide operating temperature range



BH curves for MRHCCS4-A and -B



Shear Stress MRHCCS4-A



Shear Stress MRHCCS4-B