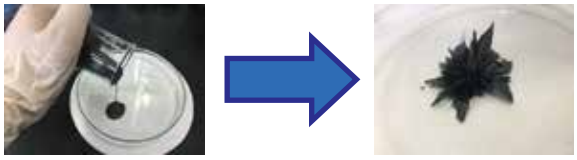
SOMAGNAR HA-01S
Magneto-Rheological Fluid

About Magneto-Rheological Fluid

Magneto-rheological fluid (also called MR fluid) is a liquid in which micron-sized magnetic particles are dispersed in a carrier fluid. When a magnetic field is applied, the viscosity of the liquid is heightened and results in a semi-solid state.



Magnetic Field:OFF　　Magnetic Field:ON

Features

Low Viscosity

The viscosity is kept low in the absence of a magnetic field in order to reduce the initial torque of the machine in which it is used.

Excellent Magnetic Response & Reproducibility

Our uniquely tuned particle control technology achieves high responsiveness when a magnetic field is applied.
In addition, the viscosity is stable even when a magnetic field is repeatedly applied.

Properties

SOMAGNAR HA-01S

Base Oil	Synthetic Lubricating Oil
Appearance	Black-Gray
Specific Gravity	3.2
Solid Content by Weight	80.3wt%
Operational Temperature Range	-40℃～175℃
25℃ Thermal Conductivity	0.3～1.0W/(m･K)
Viscosity	0.5Pa･s
Centrifugation	No Agglomerate at 500rpm for 40minutes

These are representative values and should not be seen as the end results for all products in every lot.

Comparison after centrifugation

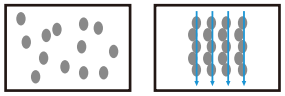
Comparison product A:
Agglomerates

HA-01S:
No Agglomerate

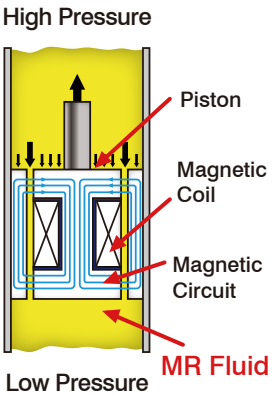
Applications

Shock Absorbing Device
(Damper Mechanism)

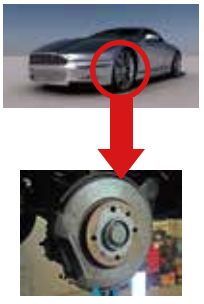
State of Magnetic Particles in MR Fluid

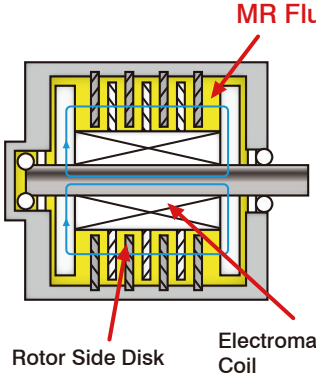


Magnetic Field:OFF　Magnetic Field:ON (Cluster State)



Brake Device





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