

# ELECTRO-RHEOLOGICAL FLUID LID 3354d

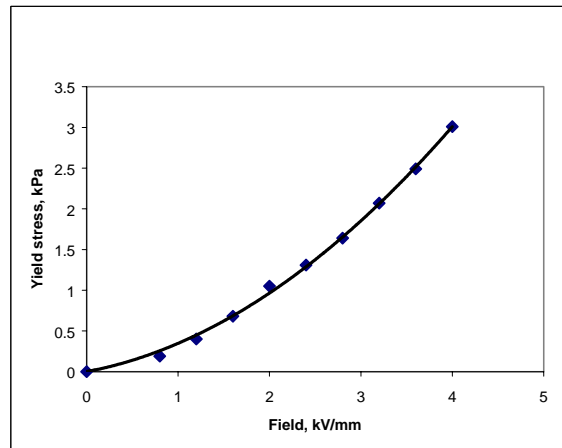
## PRODUCT DESCRIPTION

LID 3354d is an electro-rheological fluid made up of 37.5% by volume of sub 45 µm polymer particles in a density matched silicone based oil. It is designed for use as a general-purpose ER fluid with an optimal balance of critical properties and good engineering behaviour. Solid and liquid are density matched to minimise settling.

## APPLICATIONS

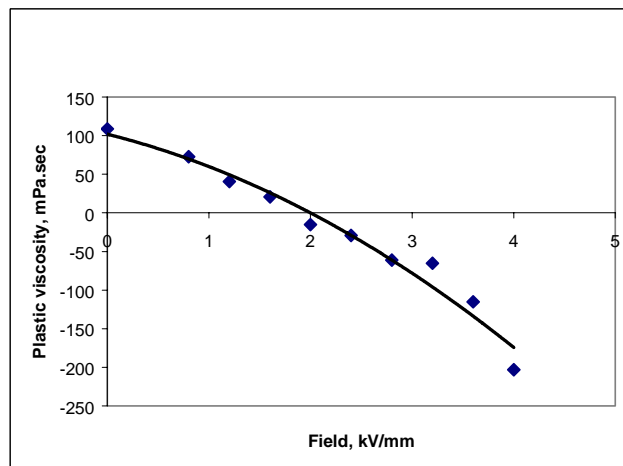
LID 3354d can be used in suitable equipment wherever electronic control of mechanical properties is required, such as in controlled dampers, actuators, clutches, brakes and valves.

### DYNAMIC YIELD STRESS AT 30°C

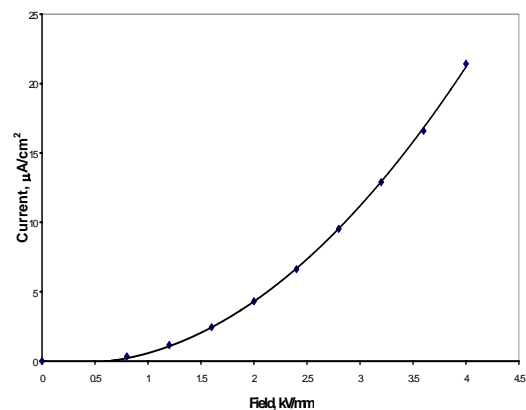


Fitted to  $Y_d = A.E^2$   
 $A = 0.19 \text{ kPa.mm}^2/\text{kV}^2$

### PLASTIC VISCOSITY AT 30°C



### CURRENT DENSITY AT 30°C



Fitted to  $J = P.E + Q.E^2$   
 $P = -10 \times 10^{-9} \text{ A/V.m}$   
 $Q = 15.7 \times 10^{-15} \text{ A/V}^2$

## PHYSICAL PROPERTIES

Density:  $1.46 \times 10^3 \text{ kg/m}^3$   
 Viscosity: 110 mPa.sec at 30°C  
 Boiling Point: > 200°C  
 Flash Point: >150°C  
 Auto Ignition Point: N/A  
 Vapour Pressure: N/A  
 Vapour Density: N/A  
 Freezing Point: < -20°C  
 Insoluble in Water  
 Does not attack elastomers

## GENERAL INFORMATION

**For safe handling of this product, consult the Material Safety Data Sheet (msds3354d.doc)**

### Durability

No deterioration in performance has been observed during long-term use in closed systems, where the fluid has been operated within its specification.

### Storage

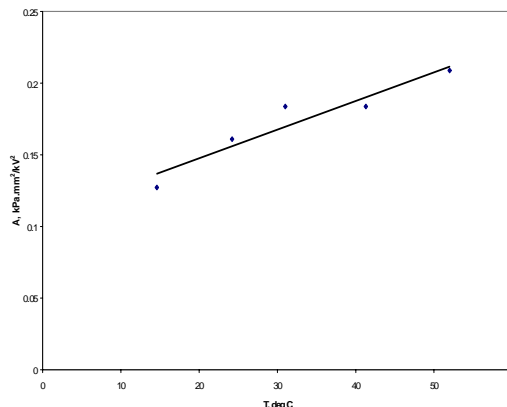
Products stored in closed containers at room temperature have not shown deterioration after storage periods greater than four years.

### Note

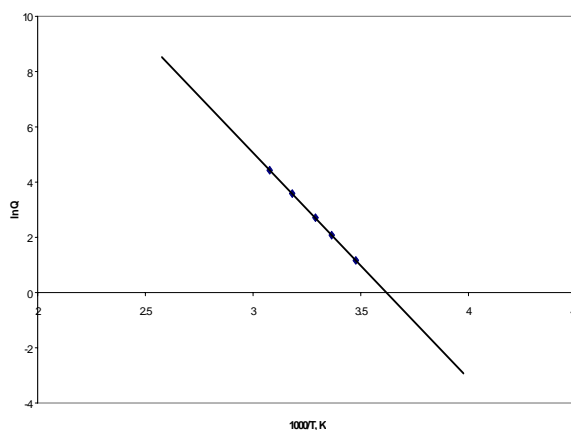
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***The product is covered by one or more patents or patent applications.***

### TEMPERATURE DEPENDENCE OF A



### TEMPERATURE DEPENDENCE OF Q



**For more information on Smart ER fluids or any aspect of ER technology contact:**

**Dr M S Ahmed,**

**Smart Technology Ltd**

PO Box 13272

Solihull, West Midlands

B91 9EU, UK

Phone: +44 (0)8456445059

Fax: +44 (0)1212756197

Email: [sami@smarttec.co.uk](mailto:sami@smarttec.co.uk)

Web: [www.smarttec.co.uk](http://www.smarttec.co.uk)