

## Elcometer Viscosity Flow Cups



Elcometer Viscosity Flow Cups

### At a glance:

Anodized aluminium with a stainless steel orifice

Expressed in seconds (s) flow time but can be converted to Centistokes (cSt)

Very easy to use instruments made of anodized aluminium, with a stainless steel orifice, for measuring the consistency of paints, varnishes and similar products.

The measured kinematic viscosity is generally expressed in seconds (s) flow time, which can be converted to Centistokes (cSt) if the Standard stipulates a conversion method.

The cups can be supplied separately or with an adjustable stand<sup>1</sup> which includes a precision level and an overflow glass draw down plate. A flow jacket<sup>1</sup> (thermojacket) for temperature control is also available.

Several ranges are available, according to Standards; from 5 to 5100cSt.

### Viscosity

The extent to which a liquid resists a tendency to flow is defined as viscosity. In the coatings industry, this behaviour is one of the key parameters.

Elcometer manufactures and supplies a wide range of viscosity gauges from flow cups and dip cups to rotational viscometers

Flow Cups: The process of flow through an orifice can often be used as a relative measurement and classification of viscosity. This measured kinematic viscosity is generally expressed in seconds of flow time which can be converted into Centistokes using a viscosity disc calculator.

Dip Cups: Using the same principle to the flow cups, dip cups – Frikmar, Zahn, Shell, etc – can be used to provide a quick viscosity measurement on the shop floor or on site

Rotational: Rotational viscometers are used to determine the viscosity of liquids which do not depend solely on temperature and pressure. The behaviour of non-Newtonian liquids can be determined using a range of rotational viscometers.

Part Number		Description	Cup No.	Orifice Diameter	Range (cSt) <sup>2</sup>
Without Certificate	With Certificate				
K0002350M001	K0002350M001C <sup>(d)</sup>	Elcometer 2350 DIN Flow Cup Can be used in accordance with: DIN 53211 (Cup 4 only)	2	2mm	-
K0002350M002	K0002350M002C <sup>(e)</sup>		4	4mm	96 – 683
K0002350M003	K0002350M003C <sup>(d)</sup>		6	6mm	-
K0002350M004	K0002350M004C <sup>(d)</sup>		8	8mm	-
K0002351M001	K0002351M001C <sup>(e)</sup>	Elcometer 2351 ASTM/ FORD Flow Cup Can be used in accordance with: ASTM D 1200	1	1.90mm	10 – 35
K0002351M002	K0002351M002C <sup>(e)</sup>		2	2.53mm	25 – 120
K0002351M003	K0002351M003C <sup>(e)</sup>		3	3.40mm	49 – 220
K0002351M004	K0002351M004C <sup>(e)</sup>		4	4.12mm	70 – 370
K0002351M005	K0002351M005C <sup>(e)</sup>		5	5.20mm	200 – 1200
K0002352M001	K0002352M001C <sup>(d)</sup>	Elcometer 2352 AFNOR Flow Cup Can be used in accordance with: NF T30-014	2.5	2.46mm	5 – 140
K0002352M002	K0002352M002C <sup>(d)</sup>		4	4mm	50 – 1100
K0002352M003	K0002352M003C <sup>(d)</sup>		6	6mm	510 - 5100
K0002353M001	K0002353M001C <sup>(e)</sup>	Elcometer 2353 ISO Flow Cup Can be used in accordance with: ASTM D 5125, DIN 53224, EN 535, ISO 2431, NBN T22-108, NF T30-070	3	3mm	7 – 42
K0002353M002	K0002353M002C <sup>(e)</sup>		4	4mm	34 – 135
K0002353M003	K0002353M003C <sup>(e)</sup>		5	5mm	91 – 326
K0002353M004	K0002353M004C <sup>(e)</sup>		6	6mm	188 – 684
K0002353M005	K0002353M005C <sup>(d)</sup>		8	8mm	-
K0002354M001	K0002354M001C <sup>(d)</sup>	Elcometer 2354 BS Flow Cup Can be used in accordance with: BS 3900 A6 :1971, AS/NZS 1580.214.2 (Cup 4 only)	2	2.38mm	6 – 43
K0002354M002	K0002354M002C <sup>(d)</sup>		3	3.17mm	28 – 150
K0002354M003	K0002354M003C <sup>(d)</sup>		4	3.97mm	89 – 340
K0002354M004	K0002354M004C <sup>(d)</sup>		5	4.76mm	79 – 441
K0002354M005	K0002354M005C <sup>(d)</sup>		6	7.14mm	369 – 1302

<sup>1</sup> Must be ordered separately <sup>2</sup> For information only <sup>(d)</sup> Dimensional Certificate <sup>(e)</sup> Efflux Time Certificate

# Elcometer Viscosity Cup Standard Calibration Oils



Elcometer 2410 Calibration Oils

In order to check a viscosity cup's calibration or to certify it for ISO purposes, it is imperative that viscosity cup standard calibration oils are used.

Standard oils have a specified drain time, dependent upon the viscosity cup type (Ford, Shell, Zahn, etc) and the orifice size or cup number used.

To check the viscosity cup, use the standard viscosity oils in place of the liquid and measure the drain time.

Specific calibration oils can only be used with specific flow and dip cups. Please refer to the table below to establish which oil is required for each cup.

All viscosity oils are supplied in ½ litre (1 pint) bottles.

**At a glance:**

To check the viscosity cup's calibration and certify it for ISO purposes

The specific drain time is dependent on the cup type

Replace your liquid with the standard oils to measure drain time

Part Number	Range at 25°C (77°F)	Cup Type	Cup No.	Model	Orifice Diameter
K0002410M022	60 – 120cSt	DIN Flow Cup	4	Elcometer 2350/2	4mm
K0002410M023	100 – 230cSt	DIN Flow Cup	4	Elcometer 2350/2	4mm
K0002410M024	200 – 460cSt	DIN Flow Cup	4	Elcometer 2350/2	4mm
K0002410M021	20 – 34cSt	ASTM/Ford Flow Cup	2	Elcometer 2351/2	2.53mm
K0002410M022	60 – 120cSt	ASTM/Ford Flow Cup	3	Elcometer 2351/3	3.4mm
K0002410M023	100 – 230cSt	ASTM/Ford Flow Cup	4	Elcometer 2351/4	4.12mm
K0002410M021	20 – 34cSt	ISO Flow Cup	3	Elcometer 2353/1	3mm
K0002410M022	60 – 120cSt	ISO Flow Cup	4	Elcometer 2353/2	4mm
K0002410M023	100 – 230cSt	ISO Flow Cup	6	Elcometer 2353/4	6mm
K0002410M024	200 – 460cSt	ISO Flow Cup	6	Elcometer 2353/4	6mm

## Related Products



Elcometer 7300 Stopwatch

### Elcometer 7300 High Precision Stopwatch:

Measuring intervals: 1/100 second for 30 minutes and 1 second for 24 hours. Time / calendar display, 12/24 hour mode.

**Part Number:** K0007300M201



Elcometer 2400 Conversion Disc

### Elcometer 2400 Conversion Disc:

Allows viscosity (cSt) and flow times of different cups to be compared.

**Part Number:** KT002400N003



### Adjustable Stand with Bubble Level & Draw Down Plate

**Part Number:** KT002400N001



### Double-Walled Stand with Thermo jacket

**Part Number:** KT002400N002

#### ENGLAND

Elcometer Limited  
Edge Lane  
Manchester M43 6BU

Tel: +44 (0)161 371 6000  
Fax: +44 (0)161 371 6010  
e-mail: sales@elcometer.com  
www.elcometer.com

#### USA

Elcometer Inc  
1893 Rochester Industrial Drive  
Rochester Hills Michigan 48309

Tel: +1 248 650 0500  
Toll Free: 800 521 0635  
Fax: +1 248 650 0501  
e-mail: inc@elcometer.com  
www.elcometer.com

#### ASIA & THE FAR EAST

Elcometer (Asia) Pte Ltd  
896 Dunearn Rd  
Sime Darby Centre #3-09  
Singapore 589472,  
Republic of Singapore

Tel: +65 6462 2822  
Fax: +65 6462 2860  
e-mail: asia@elcometer.com  
www.elcometer.com

#### BELGIUM

Elcometer SA  
Rue Vallée 13  
B-4681 Hermalle /s Argenteau

Tel: +32 (0)4 379 96 10  
Fax: +32 (0)4 374 06 03  
e-mail: be\_info@elcometer.be  
www.elcometer.be

#### NETHERLANDS

Elcometer NL  
Newtonlaan 115  
3584 BH Utrecht

Tel: +31 (0)30 210 7005  
Fax: +31 (0)30 210 6666  
e-mail: nl\_info@elcometer.com  
www.elcometer.com

#### FRANCE

Elcometer Sarl  
97 Route de Chécy  
45430 BOU

Tel: +33 (0)2 38 86 33 44  
Fax: +33 (0)2 38 91 37 66  
e-mail: fr\_info@elcometer.fr  
www.elcometer.fr

#### GERMANY

Elcometer Instruments GmbH  
Ulmer Strasse 68  
D-73431 Aalen

Tel: +49 (0)7361 52806 0  
Fax: +49 (0)7361 52806 77  
e-mail: de\_info@elcometer.de  
www.elcometer.de