

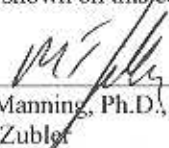
# REPORT OF CALIBRATION

Mfg. Date: 10/11/2006		CANNON® CERTIFIED VISCOSITY STANDARD			
Viscosity Standard: RT30000		Lot No.: 06201a	Use before: 10/31/2008		
Temperature		Kinematic Viscosity	Viscosity	Density	Saybolt Viscosity
°C	°F	mm <sup>2</sup> /s, (cSt)	mPa · s, (cP)	g/mL	seconds
20.00	68.00	33680	32830	0.9748	
23.00	73.40	31724	30839	0.9721	
24.00	75.20	31105	30209	0.9712	
25.00	77.00	30500	29590	0.9703	
26.00	78.80	29910	28995	0.9694	
27.00	80.60	29335	28411	0.9685	
40.00	104.00	23110	22120	0.9570	

All data are traceable to the National Institute for Standards and Technology

This report of test shall not be reproduced except in full, without the written approval of Cannon Instrument Company.

The Cannon Instrument Company certifies that the kinematic viscosities were determined by the Master Viscometer technique reported in the Journal of Research of the National Bureau of Standards, (Vol. 52, No. 3, March 1954, Research Paper 2479) and Cannon Laboratory Standard viscometer. The above data are based on the primary standard, water at 20°C (ITS-90), with a viscosity of 1.0016 mPa · s or kinematic viscosity of 1.0034 mm<sup>2</sup>/s as listed in ISO 3666. See also ASTM methods D2162, D445, D446, D2161, D2171 and ISO 3104 and 3105. This material ceases to be a standard after the date shown on this certificate. Manufactured in the U.S.A.

  
 R. E. Manning, Ph.D., P.E.  
 M. T. Zubler  
 K. O. Henderson

*Results relate only to the sample tested.*

<sup>1</sup>The inclusion of the A2LA logo does not imply certification/approval of the products calibrated or tested

# ANALYSIS OF DATA



1262.01<sup>1</sup>

Kinematic viscosity measurements of viscosity standards at temperatures of 15°C through 45°C have been made using Cannon and Cannon-Ubbelohde (long-capillary) Master viscometers, as described in ASTM D 2162. The expanded uncertainty of the measurements at 95% confidence over the temperature range of 15°C to 45°C is as follows:

Range of Kin Vis mm <sup>2</sup> /s	Expanded Uncertainty* (%) at 15 to 45°C
<10	0.16
10-100	0.22
100-1000	0.29
1000-10,000	0.38
10,000-100,000	0.44

\*An expanded uncertainty  $U$  is determined by multiplying the combined standard uncertainty  $u_c$  by a coverage factor  $k$ ,  $U = k u_c$ , where  $k = 2$ . See NIST Technical Note 1297, 1994 edition, Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results.

The assigned accuracy of the primary viscosity standard at 20°C (ITS-90) is  $\pm 0.17\%$ . See ISO 3666.

The estimated precision of density measurements for liquids having a viscosity less than 1000 mm<sup>2</sup>/s is  $\pm 0.0001$  g/mL. For liquids of viscosity from 1000 to 100,000 mm<sup>2</sup>/s, the estimated accuracy of density is  $\pm 0.0002$  g/mL. Viscosity in mPa·s is the product of the measured kinematic viscosity in mm<sup>2</sup>/s and density in g/mL, both at the same temperature.

Temperature measurements are traceable to the National Institute for Standards and Technology, Test No. 260470.

CAS No.: 63148-62-9  
FORMULATION: Silicone(100%)  
D.O.T. NAME and CLASS: None

HEALTH HAZARD: This is not a hazardous product as defined in the OSHA communication standard.  
FIRST AID PROCEDURES: Skin: Wipe off and wash with water.  
EYES: Flush immediately with water.  
ORAL: No first aid should be needed.  
Cannon Instrument Co. certifies that the viscosities are based on the primary standard, water at 20°C as listed in ISO 3666. This material ceases to be a standard after the date shown on this certificate. Manufactured in the USA.

DOT: Not regulated      EPA: Not regulated

Silicone Viscosity Standards

RT5 through RT100 000

THIS PRODUCT WAS CALIBRATED WITHIN A QUALITY SYSTEM WHICH IS REGISTERED TO ISO 9002.

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Tom Zubler  
Director of Quality Assurance