



## VISCOSITY OIL STANDARDS

Calibrated by PSL Calibration Laboratory  
Accredited Laboratory No. 0247 to ISO17025

PSL has shown that it meets ISO 17025 and has been accredited to manufacture, CALIBRATE & certify viscosity oils by UKAS (United Kingdom Accreditation Service). Viscosity Oil Standards are calibrated using MASTER viscometers in accordance with ASTM D 2162. All viscosity values produced by PSL are directly traceable to the primary standard of water at 20°C (68°F) of 1.0034 mm<sup>2</sup>/s. This value is agreed by the National Institute of Standards & Technology (NIST).



CALIBRATION No. 0247

### PSL sets the standard for viscosity measurement:

- Calibrations are performed using master viscometers.
- Full compliance is shown with ISO 17025 by third party accreditation.
- Direct traceability to NIST and other international laboratories.
- Uncertainties of measurement are stated on calibration certificates.
- Calibration certificates provide third party quality assurance to the user (required under ISO 9002).
- Using stable base oils provides long shelf lives.



### Summary of Best Measurement Capability Expressed as an Expanded Uncertainty (K=2)

mm <sup>2</sup> /s <sup>2</sup> , mPa.s	Kinematic	Dynamic
Up to 6	0.18 %	0.18 %
6 to 19	0.18 %	0.18 %
19 to 100	0.22 %	0.22 %
100 to 450	0.27 %	0.27 %
450 to 1750	0.40 %	0.40 %
1750 & above	0.66 %	0.66 %

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## PSL Kinematic Viscosity Oil Standards

(Nominal Kinematic Viscosity values, stated in mm<sup>2</sup>/s, cSt)

PSL Ref	Marked	20°C	25°C	40°C	50°C	80°C	100°C
<b>2700-V01*</b>	N.4	0.47	0.45	0.40	-	-	-
<b>2700-V02*</b>	N.8	0.95	0.89	0.75	-	-	-
<b>2700-V03*</b>	N1.0	1.3	1.2	0.97	0.91	-	-
<b>2700-V04</b>	S3 #	4.6	4.0	2.9	2.4	1.6	1.2
<b>2700-V05</b>	S6	11	8.9	5.7	4.4	2.5	1.8
<b>2700-V06</b>	N10	21	17	10	7.3	4	2.7
<b>2700-V07</b>	S20	44	34	18	13	6	3.8
<b>2700-V08</b>	N35	87	66	32	21	9	5.3
<b>2700-V09</b>	S60	170	120	54	35	12	7.3
<b>2700-V10</b>	N100	330	230	97	60	20	11
<b>2700-V11</b>	S200	660	460	180	105	30	16
<b>2700-V12</b>	N350	1300	850	310	170	45	23
<b>2700-V13</b>	S600	2400	1600	520	280	65	33
<b>2700-V14</b>	N1000	4690	3020	940	480	100	48
<b>2700-V15</b>	S2000	9600	5900	1700	890	160	69
<b>2700-V16</b>	N4000	20000	12000	3400	1600	280	120
<b>2700-V17</b>	S8000	41000	25000	6700	3200	520	240
<b>2700-V18</b>	N15000	77000	47000	13000	6100	900	360
<b>2700-V19</b>	S30000	-	89000	23000	11000	1600	630

# also 70mm<sup>2</sup>/s at -40°C on request

## PSL Dynamic Viscosity Oil Standards

(Nominal Dynamic Viscosity values, stated in mPa.s, cP)

PSL Ref	Marked	20°C	25°C	40°C	50°C	80°C	100°C
<b>2700-V01*</b>	N.4	0.31	0.29	0.26	-	-	-
<b>2700-V02*</b>	N.8	0.73	0.68	0.56	-	-	-
<b>2700-V03*</b>	N1.0	1.0	0.93	0.76	0.71	-	-
<b>2700-V04</b>	S3	3.9	3.3	2.4	1.9	1.2	0.9
<b>2700-V05</b>	S6	9.1	7.6	4.8	3.7	2	1.4
<b>2700-V06</b>	N10	18	15	8.8	6.2	3	2.2
<b>2700-V07</b>	S20	39	31	16	11	5	3.2
<b>2700-V08</b>	N35	76	57	27	18	7	4.3
<b>2700-V09</b>	S60	140	100	46	30	10	6.0
<b>2700-V10</b>	N100	290	210	84	50	17	9.0
<b>2700-V11</b>	S200	580	400	150	90	25	13
<b>2700-V12</b>	N350	1100	750	270	150	37	19
<b>2700-V13</b>	S600	2100	1400	450	240	54	28
<b>2700-V14</b>	N1000	4080	2630	810	415	85	39
<b>2700-V15</b>	S2000	7600	4900	1500	770	135	62
<b>2700-V16</b>	N4000	17000	11000	2900	1400	238	100
<b>2700-V17</b>	S8000	33000	20000	5900	2800	490	200
<b>2700-V18</b>	N15000	68000	41000	11000	5400	770	300
<b>2700-V19</b>	S30000	-	80000	21000	9500	1387	540

\* Under IATA regulations these items must be treated as hazardous due to their low flash point and are subject to high shipping charges.