

UNITED STATES DEPARTMENT OF COMMERCE
WASHINGTON

National Bureau of Standards
Certificate

STANDARD THERMOELECTRIC SAMPLE 118

ALUMEL

The following table gives the thermal electromotive forces of this sample of Alumel against the National Bureau of Standards platinum standard Pt 27, corresponding to the temperatures of the hot junction when the cold junctions are at 0° C (32° F).

Electromotive Force *versus* Temperature

Degrees Centigrade	International Millivolts	Degrees Fahrenheit	International Millivolts
0	0.00	0	+0.24
25	-0.34	32	0.00
100	-1.29	75	-0.32
200	-2.16	200	-1.21
300	-2.87	400	-2.19
400	-3.61	600	-2.98
500	-4.41	800	-3.82
600	-5.26	1,000	-4.73
700	-6.16	1,200	-5.70
800	-7.07	1,400	-6.71
900	-7.95	1,600	-7.70
1,000	-8.79	1,800	-8.64
1,100	-9.59	2,000	-9.54
1,200	-10.35	2,200	-10.38
1,300	-11.08	2,400	-11.19

The above values apply only when the wire is heated in an oxidizing atmosphere and are accurate to ± 0.02 millivolt when the wire is heated to the corresponding temperature for the first time. However, the above accuracy may still be attained or closely approximated in later use if the depth of immersion is increased each time the wire is used.

For further information consult National Bureau of Standards Research Papers RP767 and RP768.

Washington, D. C.
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LYMAN J. BRIGGS,
Director.