

**A.3.3 Propiedades físicas del aire a 101.325 kPa (1 atm abs)**  
UNIDADES SI

$T$ (°C)	$T$ (K)	$\rho$ (kg/m <sup>3</sup> )	$c_p$ (kJ/kg·K)	$\mu \times 10^5$ (Pa·s, o kg/m·s)	$k$ (W/m·K)	$N_{Pr}$	$\beta \times 10^3$ (1/K)	$g\beta\rho^2/m^2$ (1/K·m <sup>3</sup> )
-17.8	255.4	1.379	1.0048	1.62	0.02250	0.720	3.92	$2.79 \times 10^8$
0	273.2	1.293	1.0048	1.72	0.02423	0.715	3.65	$2.04 \times 10^8$
10.0	283.2	1.246	1.0048	1.78	0.02492	0.713	3.53	$1.72 \times 10^8$
37.8	311.0	1.137	1.0048	1.90	0.02700	0.705	3.22	$1.12 \times 10^8$
65.6	338.8	1.043	1.0090	2.03	0.02925	0.702	2.95	$0.775 \times 10^8$
93.3	366.5	0.964	1.0090	2.15	0.03115	0.694	2.74	$0.534 \times 10^8$
121.1	394.3	0.895	1.0132	2.27	0.03323	0.692	2.54	$0.386 \times 10^8$
148.9	422.1	0.838	1.0174	2.37	0.03531	0.689	2.38	$0.289 \times 10^8$
176.7	449.9	0.785	1.0216	2.50	0.03721	0.687	2.21	$0.214 \times 10^8$
204.4	477.6	0.740	1.0258	2.60	0.03894	0.686	2.09	$0.168 \times 10^8$
232.2	505.4	0.700	1.0300	2.71	0.04084	0.684	1.98	$0.130 \times 10^8$
260.0	533.2	0.662	1.0341	2.80	0.04258	0.680	1.87	$0.104 \times 10^8$

NOTA: Se debe cambiar de signo el exponente de la viscosidad ( $\mu$ ) y del coeficiente volumétrico de expansión del fluido ( $\beta$ )

**A.3.3 Propiedades físicas del aire a 101.325 kPa (1 atm abs)**  
UNIDADES DEL SISTEMA INGLÉS

$T$ (°F)	$\rho$ ( $\frac{lb_m}{pie^3}$ )	$c_p$ ( $\frac{btu}{lb_m \cdot ^\circ F}$ )	$\mu$ (centipoise)	$k$ ( $\frac{btu}{h \cdot pie \cdot ^\circ F}$ )	$N_{Pr}$	$\beta \times 10^3$ (1/K)	$g\beta\rho^2/\mu^2$ (1/K·m <sup>3</sup> )
0	0.0861	0.240	0.0162	0.0130	0.720	2.18	$4.39 \times 10^6$
32	0.0807	0.240	0.0172	0.0140	0.715	2.03	$3.21 \times 10^6$
50	0.0778	0.240	0.0178	0.0144	0.713	1.96	$2.70 \times 10^6$
100	0.0710	0.240	0.0190	0.0156	0.705	1.79	$1.76 \times 10^6$
150	0.0651	0.241	0.0203	0.0169	0.702	1.64	$1.22 \times 10^6$
200	0.0602	0.241	0.0215	0.0180	0.694	1.52	$0.840 \times 10^6$
250	0.0559	0.242	0.0227	0.0192	0.692	1.41	$0.607 \times 10^6$
300	0.0523	0.243	0.0237	0.0204	0.689	1.32	$0.454 \times 10^6$
350	0.0490	0.244	0.0250	0.0215	0.687	1.23	$0.336 \times 10^6$
400	0.0462	0.245	0.0260	0.0225	0.686	1.16	$0.264 \times 10^6$
450	0.0437	0.246	0.0271	0.0236	0.674	1.10	$0.204 \times 10^6$
500	0.0413	0.247	0.0280	0.0246	0.680	1.04	$0.163 \times 10^6$

Referencia: National Bureau of Standards, Circular 461C, 1947; 564, 1955; NBS-NACA, Tables of Thermal Properties of Gases, 1949; F. G. Keyes, Trans. A.S.M.E., 73, 590, 597(1951); 74, 1303 (1952); D. D. Wagman, Selected Values of Chemical Thermodynamic Properties. Washington, D.C.: National Bureau of Standards, 1953.

NOTA: Se debe cambiar de signo el exponente del coeficiente volumétrico de expansión del fluido ( $\beta$ )