SPEED OF SOUND IN DRY AIR

The values in this table were calculated from the equation of state for dry air (average molecular weight 28.96) treated as a real gas. Values refer to standard atmospheric pressure. The speed of sound varies only slightly with pressure; at two atmospheres and −100°C the value decreases by 0.13%, while at two atmospheres and 80°C the speed increases by 0.04%.

Reference

Sytchev, V. V., Vasserman, A. A., Kozlov, A. D., Spiridonov, G. A., and Tsymarny, V. A., *Thermodynamic Properties of Air*, Hemisphere Publishing Corp., New York, 1987.

t/°C	v_s/m s^{-1}	t/°C	v_s/m s^{-1}	t/°C	v_s/m s^{-1}
−100	263.5	−35	309.5	30	349.1
−95	267.3	−30	312.7	35	352.0
−90	271.1	−25	315.9	40	354.8
−85	274.8	−20	319.1	45	357.6
−80	278.5	−15	322.3	50	360.4
−75	282.1	−10	325.4	55	363.2
−70	285.7	−5	328.4	60	365.9
−65	289.2	0	331.5	65	368.6
−60	292.7	5	334.5	70	371.3
−55	296.1	10	337.5	75	374.0
−50	299.5	15	340.4	80	376.7
−45	302.9	20	343.4		
−40	306.2	25	346.3		