

Supporting information

High pressure speed of sound measurements of

trans-1-chloro-3,3,3-trifluoropropene

(R1233zd(E)) in liquid region for temperature

from (273.15 to 353.15) K

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Table S1 provides the experimental speed of sound, w_{exp} , measurements together with the corresponding thermodynamic state point determined by the measured temperature and pressures values.

Table S1: Experimental measurements of the speed of sound, w_{exp} , of R1233zd(E) as function temperature, T_{exp} , and pressure, p_{exp} .

T_{exp}/K	$p_{\text{exp}}/\text{MPa}$	$w_{\text{exp}}/(\text{m/s})$
273.16	0.19	786.78
273.16	1.00	791.78
273.15	5.03	815.43
273.16	10.05	842.75
273.15	20.15	892.92
273.15	25.09	915.36
273.14	30.07	936.90
273.16	35.03	957.33
283.15	0.19	746.74
283.16	0.98	752.01
283.14	5.17	778.28
283.14	10.02	806.46
283.16	20.00	858.64
283.14	24.93	882.24
283.14	30.26	906.25
283.16	34.92	926.30
293.15	0.17	707.09
293.16	1.03	713.25
293.16	5.09	740.63
293.15	9.99	771.05
293.15	20.00	826.30
293.16	30.10	875.12
293.15	35.00	896.92
313.14	0.27	628.50
313.16	1.18	636.05
313.15	5.01	666.72
313.15	10.00	702.15
313.15	19.99	763.58
313.15	30.05	816.73
313.15	34.92	840.09
333.14	5.01	594.52
333.14	9.98	634.90
333.15	19.99	704.25
333.15	29.97	761.64
333.15	35.06	787.99
353.14	10.01	571.03
353.14	15.09	612.03
353.14	20.15	648.34
353.15	24.99	679.91
353.15	30.00	710.32
353.15	35.04	738.23

The relative combine expanded uncertainty of speed of sound w_{exp} is $U_{\text{r}}(w_{\text{exp}}) = 0.1\%$ ($k = 2$), uncertainty of temperature is 0.02 K and the uncertainty of the pressure is 0.025 MPa.