

Methane

Other names:	Biogas CH4 Fire Damp Marsh gas Methyl hydride R 50 R 50 (refrigerant) carbane
Inchi:	InChI=1S/CH4/h1H4
InchiKey:	VNWK TOKETHGBQD-UHFFFAOYSA-N
Formula:	CH4
SMILES:	C
Mol. weight [g/mol]:	16.04
CAS:	74-82-8

Physical Properties

Property code	Value	Unit	Source
af	0.0110		KDB
affp	543.50	kJ/mol	NIST Webbook
aigt	813.15	K	KDB
basg	520.60	kJ/mol	NIST Webbook
chg	-890.35 ± 0.30	kJ/mol	NIST Webbook
chg	-891.80 ± 1.10	kJ/mol	NIST Webbook
chg	-890.70 ± 0.40	kJ/mol	NIST Webbook
chg	-890.16 ± 0.30	kJ/mol	NIST Webbook
dm	0.00	debye	KDB
fil	5.00	% in Air	KDB
flu	15.00	% in Air	KDB
gf	-50.87	kJ/mol	KDB
grad	1.1230		KDB
hf	-73.40 ± 1.10	kJ/mol	NIST Webbook
hf	-74.50 ± 0.40	kJ/mol	NIST Webbook
hf	-74.85 ± 0.31	kJ/mol	NIST Webbook
hf	-74.90	kJ/mol	KDB
hf	-74.60 ± 0.30	kJ/mol	NIST Webbook
ie	12.60	eV	NIST Webbook
ie	12.60 ± 0.40	eV	NIST Webbook

ie	12.63 ± 0.02	eV	NIST Webbook
ie	13.60	eV	NIST Webbook
ie	12.75 ± 0.02	eV	NIST Webbook
ie	12.82 ± 0.02	eV	NIST Webbook
ie	12.61 ± 0.01	eV	NIST Webbook
ie	12.60	eV	NIST Webbook
ie	12.61 ± 0.01	eV	NIST Webbook
ie	12.64	eV	NIST Webbook
ie	12.94 ± 0.04	eV	NIST Webbook
ie	12.51	eV	NIST Webbook
ie	12.51	eV	NIST Webbook
ie	12.62 ± 0.01	eV	NIST Webbook
ie	12.78	eV	NIST Webbook
ie	12.75	eV	NIST Webbook
ie	12.70	eV	NIST Webbook
ie	12.99 ± 0.05	eV	NIST Webbook
ie	12.75 ± 0.05	eV	NIST Webbook
ie	12.90	eV	NIST Webbook
ie	12.70	eV	NIST Webbook
ie	12.55 ± 0.05	eV	NIST Webbook
ie	12.70 ± 0.01	eV	NIST Webbook
ie	12.80	eV	NIST Webbook
ie	13.00 ± 0.02	eV	NIST Webbook
ie	13.60	eV	NIST Webbook
ie	13.60 ± 0.10	eV	NIST Webbook
ie	13.60	eV	NIST Webbook
ie	12.71 ± 0.02	eV	NIST Webbook
log10ws	-1.11		Aqueous Solubility Prediction Method
log10ws	-0.90		Estimated Solubility Method
logp	0.636		Crippen Method
mvol	24.950	ml/mol	McGowan Method
nfpaf	%!d(float64=4)		KDB
nfpah	%!d(float64=1)		KDB
pc	4599.00	kPa	KDB
pt	11.70	kPa	KDB
sg	188.66 ± 0.42	J/molxK	NIST Webbook
tb	111.65 ± 0.07	K	NIST Webbook
tb	111.70 ± 0.30	K	NIST Webbook
tb	111.70	K	NIST Webbook
tb	111.60 ± 0.20	K	NIST Webbook
tb	111.65 ± 0.00	K	NIST Webbook
tb	110.20 ± 1.00	K	NIST Webbook
tb	109.20 ± 1.00	K	NIST Webbook

tb	111.70	K	NIST Webbook
tb	112.00 ± 0.50	K	NIST Webbook
tb	112.00 ± 0.50	K	NIST Webbook
tb	111.67	K	KDB
tb	112.00 ± 0.50	K	NIST Webbook
tb	111.50 ± 0.50	K	NIST Webbook
tb	111.65	K	NIST Webbook
tc	190.30 ± 0.50	K	NIST Webbook
tc	191.07 ± 0.60	K	NIST Webbook
tc	191.40 ± 1.00	K	NIST Webbook
tc	173.70 ± 20.00	K	NIST Webbook
tc	199.70 ± 10.00	K	NIST Webbook
tc	197.50 ± 7.00	K	NIST Webbook
tc	190.70 ± 0.40	K	NIST Webbook
tc	190.59 ± 0.40	K	NIST Webbook
tc	190.30 ± 0.40	K	NIST Webbook
tc	190.60 ± 0.15	K	NIST Webbook
tc	190.57 ± 0.10	K	NIST Webbook
tc	190.78 ± 0.40	K	NIST Webbook
tc	190.53 ± 0.00	K	NIST Webbook
tc	190.55	K	NIST Webbook
tc	190.55 ± 0.05	K	NIST Webbook
tc	190.78 ± 0.40	K	NIST Webbook
tc	190.60	K	NIST Webbook
tc	190.55 ± 0.01	K	NIST Webbook
tc	190.58	K	NIST Webbook
tc	190.56 ± 0.01	K	NIST Webbook
tc	190.56	K	KDB
tc	190.55 ± 0.01	K	NIST Webbook
tc	190.30 ± 0.60	K	NIST Webbook
tc	190.53 ± 0.05	K	NIST Webbook
tf	90.60 ± 0.20	K	NIST Webbook
tf	91.20 ± 2.00	K	NIST Webbook
tf	90.60 ± 0.30	K	NIST Webbook
tf	85.70 ± 0.20	K	NIST Webbook
tf	90.83	K	Aqueous Solubility Prediction Method
tf	90.69	K	KDB
tf	90.50 ± 0.20	K	NIST Webbook
tt	90.69	K	KDB
vc	0.100 ± 0.001	m3/kmol	NIST Webbook
vc	0.099	m3/kmol	NIST Webbook
vc	0.099	m3/kmol	KDB
vc	0.099	m3/kmol	NIST Webbook
zc	0.2861960		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	34.92 ± 0.25	J/mol×K	279.00	NIST Webbook
cpl	77.87 ± 1.56	J/mol×K	4380.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	60.98 ± 1.22	J/mol×K	6340.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	56.66 ± 1.13	J/mol×K	6400.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	55.11 ± 1.10	J/mol×K	6350.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures

cpl	55.54 ± 1.11	J/mol×K	4270.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	54.11 ± 1.08	J/mol×K	6300.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	64.51 ± 1.29	J/mol×K	6470.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	67.70 ± 1.35	J/mol×K	4390.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	63.24 ± 1.26	J/mol×K	4340.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures

cpl	59.37 ± 1.19	J/molxK	4350.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	57.03 ± 1.14	J/molxK	4330.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	70.97 ± 1.42	J/molxK	6450.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
cpl	54.40 ± 1.09	J/molxK	4230.00	Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Propane by Differential Scanning Calorimetry at High Pressures and Low Temperatures
dvisc	0.0000111 ± 0.0000001	Paxs	297.08	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000110 ± 0.0000001	Paxs	296.43	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000108 ± 0.0000001	Paxs	290.41	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000166 ± 0.0000002	Paxs	490.15	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000206 ± 0.0000002	Paxs	652.07	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000199 ± 0.0000002	Paxs	623.05	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000192 ± 0.0000002	Paxs	593.84	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000185 ± 0.0000002	Paxs	565.10	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000180 ± 0.0000002	Paxs	542.36	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000109 ± 0.0000001	Paxs	292.96	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000127 ± 0.0000001	Paxs	350.55	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000119 ± 0.0000001	Paxs	323.86	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000174 ± 0.0000002	Paxs	518.80	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000136 ± 0.0000001	Paxs	378.15	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000144 ± 0.0000001	Paxs	405.88	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000151 ± 0.0000002	Paxs	433.83	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000159 ± 0.0000002	Paxs	461.85	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000167 ± 0.0000002	Paxs	490.13	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000174 ± 0.0000002	Paxs	518.83	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000180 ± 0.0000002	Paxs	542.60	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000186 ± 0.0000002	Paxs	565.38	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000193 ± 0.0000002	Paxs	594.08	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000199 ± 0.0000002	Paxs	623.33	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000206 ± 0.0000002	Paxs	652.41	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000213 ± 0.0000002	Paxs	682.14	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000109 ± 0.0000001	Paxs	291.93	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000108 ± 0.0000001	Paxs	289.05	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000110 ± 0.0000001	Paxs	296.57	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000119 ± 0.0000001	Paxs	323.43	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000127 ± 0.0000001	Paxs	350.64	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000136 ± 0.0000001	Paxs	378.25	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000144 ± 0.0000001	Paxs	406.03	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000151 ± 0.0000002	Paxs	434.02	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000159 ± 0.0000002	Paxs	461.75	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000213 ± 0.0000002	Paxs	681.93	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
hfust	0.94	kJ/mol	90.70	NIST Webbook
hsubt	9.62	kJ/mol	77.50	NIST Webbook
hsubt	9.70	kJ/mol	63.00	NIST Webbook
hsubt	10.00	kJ/mol	84.00	NIST Webbook
hsubt	9.20	kJ/mol	72.00	NIST Webbook
hsubt	9.70	kJ/mol	72.00	NIST Webbook
hvapt	8.60	kJ/mol	145.00	NIST Webbook

hvapt	8.20	kJ/mol	112.00	NIST Webbook
hvapt	8.10	kJ/mol	137.00	NIST Webbook
hvapt	7.50	kJ/mol	130.00	NIST Webbook
hvapt	5.90	kJ/mol	160.00	NIST Webbook
hvapt	4.00	kJ/mol	180.00	NIST Webbook
hvapt	8.50	kJ/mol	149.00	NIST Webbook
hvapt	8.50 ± 0.10	kJ/mol	99.00	NIST Webbook
hvapt	8.60	kJ/mol	109.00	NIST Webbook
hvapt	7.72	kJ/mol	127.96	Enthalpy of Vaporization Measurements of Liquid Methane, Ethane, and Methane + Ethane by Differential Scanning Calorimetry at Low Temperatures and High Pressures
hvapt	8.05	kJ/mol	118.04	Enthalpy of Vaporization Measurements of Liquid Methane, Ethane, and Methane + Ethane by Differential Scanning Calorimetry at Low Temperatures and High Pressures
hvapt	7.62	kJ/mol	133.15	Enthalpy of Vaporization Measurements of Liquid Methane, Ethane, and Methane + Ethane by Differential Scanning Calorimetry at Low Temperatures and High Pressures

hvapt	7.91	kJ/mol	123.15	Enthalpy of Vaporization Measurements of Liquid Methane, Ethane, and Methane + Ethane by Differential Scanning Calorimetry at Low Temperatures and High Pressures
hvapt	7.65	kJ/mol	108.15	Enthalpy of Vaporization Measurements of Liquid Methane, Ethane, and Methane + Ethane by Differential Scanning Calorimetry at Low Temperatures and High Pressures
hvapt	7.65	kJ/mol	108.15	Enthalpy of Vaporization Measurements of Liquid Methane, Ethane, and Methane + Ethane by Differential Scanning Calorimetry at Low Temperatures and High Pressures
hvapt	8.52	kJ/mol	99.54	NIST Webbook
hvapt	8.60	kJ/mol	101.00	NIST Webbook
hvapt	8.60	kJ/mol	105.00	NIST Webbook
hvapt	8.40	kJ/mol	132.00	NIST Webbook
hvapt	8.70	kJ/mol	168.50	NIST Webbook
hvapt	8.17	kJ/mol	111.70	NIST Webbook
hvapt	8.50	kJ/mol	140.50	NIST Webbook
hvapt	8.18	kJ/mol	111.60	KDB
pvap	87.16	kPa	109.87	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K

pvap	55.54	kPa	104.84	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K
pvap	267.36	kPa	124.92	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K
pvap	364.90	kPa	129.89	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K
pvap	486.82	kPa	134.87	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K
pvap	1567.00 ± 2.00	kPa	159.61	Vapor-Liquid Equilibrium Data of the Methane + Tetrafluoromethane System at Temperatures from (159.61 to 178.93) K
pvap	1695.00 ± 2.00	kPa	161.58	Vapor-Liquid Equilibrium Data of the Methane + Tetrafluoromethane System at Temperatures from (159.61 to 178.93) K
pvap	2276.00 ± 2.00	kPa	169.38	Vapor-Liquid Equilibrium Data of the Methane + Tetrafluoromethane System at Temperatures from (159.61 to 178.93) K

pvap	2672.00 ± 2.00	kPa	173.90	Vapor-Liquid Equilibrium Data of the Methane + Tetrafluoromethane System at Temperatures from (159.61 to 178.93) K
pvap	3170.00 ± 2.00	kPa	178.93	Vapor-Liquid Equilibrium Data of the Methane + Tetrafluoromethane System at Temperatures from (159.61 to 178.93) K
pvap	286.85 ± 0.65	kPa	126.01	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K
pvap	324.94 ± 0.65	kPa	127.99	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K
pvap	367.76 ± 0.65	kPa	130.02	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K
pvap	413.65 ± 0.65	kPa	132.01	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K
pvap	463.11 ± 0.65	kPa	133.98	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K

pvap	517.90 ± 0.65	kPa	135.99	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K
pvap	576.38 ± 0.65	kPa	137.97	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K
pvap	641.51 ± 0.65	kPa	140.01	Vapor Liquid Equilibrium for the Mixture Methane (CH ₄) + Ethane (C ₂ H ₆) over the Temperature Range (126.01 to 140.01) K
pvap	34.27	kPa	99.97	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K
pvap	19.65	kPa	94.93	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K
pvap	235.61 ± 0.65	kPa	123.01	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N ₂) + Methane (CH ₄) in the Temperature Range of (110 to 125) K
pvap	153.92 ± 0.65	kPa	117.00	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N ₂) + Methane (CH ₄) in the Temperature Range of (110 to 125) K

pvap	132.11 ± 0.65	kPa	114.99	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N2) + Methane (CH4) in the Temperature Range of (110 to 125) K
pvap	204.78 ± 0.65	kPa	120.96	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N2) + Methane (CH4) in the Temperature Range of (110 to 125) K
pvap	112.74 ± 0.65	kPa	112.98	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N2) + Methane (CH4) in the Temperature Range of (110 to 125) K
pvap	178.11 ± 0.65	kPa	118.99	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N2) + Methane (CH4) in the Temperature Range of (110 to 125) K
pvap	88.20 ± 0.65	kPa	110.01	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N2) + Methane (CH4) in the Temperature Range of (110 to 125) K
pvap	496.11 ± 0.65	kPa	135.09	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N2) + Methane (CH4) in the Temperature Range of (110 to 125) K
pvap	374.77 ± 0.65	kPa	130.15	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N2) + Methane (CH4) in the Temperature Range of (110 to 125) K

pvap	194.65 ± 0.65	kPa	120.11	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N ₂) + Methane (CH ₄) in the Temperature Range of (110 to 125) K
pvap	134.08 ± 0.65	kPa	115.07	Vapor-Liquid Equilibrium for the Mixture Nitrogen (N ₂) + Methane (CH ₄) in the Temperature Range of (110 to 125) K
pvap	190.62	kPa	119.94	Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Temperature Range of (95 to 135) K
rhoL	419.30	kg/m ³	1969.98	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rhoL	387.99	kg/m ³	2014.28	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rhoL	392.56	kg/m ³	5208.85	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rhoL	6.67 ± 0.03	kg/m ³	1012.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rhoL	35.32 ± 0.03	kg/m ³	5009.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa

rho1	76.08 ± 0.05	kg/m3	10010.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	118.51 ± 0.05	kg/m3	14994.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	157.17 ± 0.05	kg/m3	20012.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	212.51 ± 0.05	kg/m3	29958.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	232.42 ± 0.05	kg/m3	35056.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	273.19 ± 0.05	kg/m3	49959.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	303.61 ± 0.05	kg/m3	66961.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	321.10 ± 0.05	kg/m3	79980.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	342.27 ± 0.05	kg/m3	99874.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	363.14 ± 0.05	kg/m3	124934.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	380.04 ± 0.05	kg/m3	150062.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	385.73 ± 0.05	kg/m3	159617.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	391.53 ± 0.05	kg/m3	170054.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	399.49 ± 0.05	kg/m3	185333.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	400.26 ± 0.05	kg/m3	186931.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa

rho1	400.84 ± 0.05	kg/m3	188059.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	6.40 ± 0.03	kg/m3	1002.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	13.03 ± 0.03	kg/m3	2000.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	34.17 ± 0.03	kg/m3	5001.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	48.44 ± 0.03	kg/m3	6897.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	72.93 ± 0.05	kg/m3	9993.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	113.44 ± 0.05	kg/m3	15006.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	155.02 ± 0.05	kg/m3	20696.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	205.44 ± 0.05	kg/m3	29976.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	223.78 ± 0.05	kg/m3	34563.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	267.23 ± 0.05	kg/m3	49968.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	287.02 ± 0.05	kg/m3	60012.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	302.92 ± 0.05	kg/m3	69988.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	316.16 ± 0.05	kg/m3	79855.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa

rho1	337.94 ± 0.05	kg/m3	99904.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	359.16 ± 0.05	kg/m3	124930.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	376.25 ± 0.05	kg/m3	149862.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	5.78 ± 0.03	kg/m3	1004.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	11.67 ± 0.03	kg/m3	2004.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	29.98 ± 0.03	kg/m3	5000.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	42.09 ± 0.03	kg/m3	6905.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	62.05 ± 0.05	kg/m3	9969.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	95.25 ± 0.05	kg/m3	15026.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	130.13 ± 0.05	kg/m3	20687.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	177.38 ± 0.05	kg/m3	30005.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	195.45 ± 0.05	kg/m3	34473.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	241.97 ± 0.05	kg/m3	50031.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	263.23 ± 0.05	kg/m3	59971.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	280.64 ± 0.05	kg/m3	70001.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa

rho1	295.61 ± 0.05	kg/m3	80310.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	318.74 ± 0.05	kg/m3	99908.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	341.69 ± 0.05	kg/m3	124895.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	359.79 ± 0.05	kg/m3	149542.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	369.67 ± 0.05	kg/m3	164905.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	378.16 ± 0.05	kg/m3	179829.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	4.86 ± 0.03	kg/m3	1002.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	9.74 ± 0.03	kg/m3	2001.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	24.61 ± 0.03	kg/m3	5005.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	34.20 ± 0.03	kg/m3	6915.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	49.75 ± 0.05	kg/m3	10002.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	68.72 ± 0.05	kg/m3	13795.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	74.79 ± 0.05	kg/m3	15027.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	101.64 ± 0.05	kg/m3	20675.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa

rho1	141.16 ± 0.05	kg/m3	30014.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	157.64 ± 0.05	kg/m3	34510.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	203.47 ± 0.05	kg/m3	50037.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	225.95 ± 0.05	kg/m3	59973.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	244.72 ± 0.05	kg/m3	69978.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	260.65 ± 0.05	kg/m3	79920.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	274.64 ± 0.05	kg/m3	89964.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	286.80 ± 0.05	kg/m3	99984.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	312.06 ± 0.05	kg/m3	124882.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	386.44	kg/m3	1001.19	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	8.61 ± 0.03	kg/m3	2009.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	29.74 ± 0.03	kg/m3	6886.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa

rho1	386.10	kg/m3	783.75	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	121.79 ± 0.05	kg/m3	30002.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	136.65 ± 0.05	kg/m3	34492.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	179.96 ± 0.05	kg/m3	50036.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	202.14 ± 0.05	kg/m3	59975.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	221.07 ± 0.05	kg/m3	69966.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	237.57 ± 0.05	kg/m3	80008.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	251.92 ± 0.05	kg/m3	89981.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	264.61 ± 0.05	kg/m3	99932.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	286.38 ± 0.05	kg/m3	119918.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	304.19 ± 0.05	kg/m3	139476.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rho1	407.80	kg/m3	5112.40	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)

rho1	404.19	kg/m3	1970.40	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	402.99	kg/m3	972.71	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	402.38	kg/m3	477.88	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	418.32	kg/m3	973.28	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	417.83	kg/m3	479.33	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	435.98	kg/m3	5044.56	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rho1	433.55	kg/m3	1970.76	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)

rhoI	432.74	kg/m ³	973.88	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rhoI	432.34	kg/m ³	478.95	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rhoI	432.10	kg/m ³	185.50	Development of a special single-sinker densimeter for cryogenic liquid mixtures and first results for a liquefied natural gas (LNG)
rhoI	425.00	kg/m ³	112.00	KDB
rhoI	332.14 ± 0.05	kg/m ³	149627.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
rhoI	87.48 ± 0.05	kg/m ³	20697.00	Accurate P?T Data for Methane from (300 to 450) K up to 180 MPa
speedsl	434.03	m/s	500.19	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.03	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	443.98	m/s	394.31	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.31	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	443.97	m/s	394.31	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	443.98	m/s	394.35	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.32	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.98	m/s	394.33	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.98	m/s	394.35	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.98	m/s	394.33	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.98	m/s	394.34	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	443.97	m/s	394.33	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.98	m/s	394.34	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.98	m/s	394.36	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	443.97	m/s	394.36	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.06	m/s	429.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.06	m/s	429.91	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	461.97	m/s	428.61	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	461.97	m/s	428.61	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.12	m/s	471.86	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.12	m/s	471.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.12	m/s	471.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.13	m/s	471.91	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	462.13	m/s	471.91	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.13	m/s	471.91	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.13	m/s	471.92	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.12	m/s	471.93	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.13	m/s	471.93	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.32	m/s	430.41	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	462.32	m/s	430.42	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.24	m/s	429.13	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	462.24	m/s	429.13	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	474.76	m/s	456.00	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	474.76	m/s	456.00	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	475.08	m/s	456.67	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	475.08	m/s	456.67	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	486.94	m/s	481.98	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	486.94	m/s	481.99	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	486.76	m/s	481.81	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	486.84	m/s	480.58	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	486.76	m/s	481.81	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	486.85	m/s	480.58	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.31	m/s	482.79	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.31	m/s	482.79	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.15	m/s	482.59	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.15	m/s	482.60	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.35	m/s	529.63	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	487.35	m/s	529.64	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.35	m/s	529.64	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.35	m/s	529.66	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.33	m/s	529.67	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.33	m/s	529.67	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	487.34	m/s	529.66	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	487.34	m/s	529.66	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	498.66	m/s	507.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	498.66	m/s	507.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	498.97	m/s	508.56	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	498.98	m/s	508.56	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.01	m/s	533.63	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	510.02	m/s	533.63	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.39	m/s	534.48	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.39	m/s	534.48	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.49	m/s	471.94	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.50	m/s	471.94	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.47	m/s	471.95	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	510.47	m/s	471.98	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.47	m/s	471.96	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.47	m/s	471.97	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.48	m/s	471.95	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.49	m/s	471.94	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	510.46	m/s	471.96	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	521.02	m/s	559.42	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.03	m/s	559.43	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.20	m/s	559.63	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.20	m/s	559.63	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.28	m/s	560.00	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.29	m/s	560.01	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	521.28	m/s	560.01	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.28	m/s	560.01	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.47	m/s	560.19	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	521.46	m/s	560.20	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	532.01	m/s	496.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	532.01	m/s	496.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	532.01	m/s	496.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	532.02	m/s	496.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	532.02	m/s	496.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	532.03	m/s	496.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	532.02	m/s	496.86	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	532.03	m/s	496.86	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	532.03	m/s	496.85	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.24	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.24	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.24	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.23	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.24	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	537.23	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.25	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.23	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.24	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.23	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.22	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	537.22	m/s	597.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.23	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.22	m/s	597.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.22	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.02	m/s	500.04	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.21	m/s	597.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	537.21	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.21	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.22	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.22	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	537.21	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.19	m/s	597.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.19	m/s	597.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.19	m/s	597.86	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	537.20	m/s	597.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.19	m/s	597.86	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.87	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.88	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	537.20	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	537.20	m/s	597.90	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.38	m/s	495.54	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.38	m/s	495.57	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.39	m/s	495.54	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.39	m/s	495.55	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.40	m/s	495.52	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	552.38	m/s	539.80	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.39	m/s	495.57	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.39	m/s	539.80	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.40	m/s	495.51	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.39	m/s	539.81	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	552.39	m/s	495.51	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	434.03	m/s	500.19	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.02	m/s	500.03	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.04	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.04	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.03	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.04	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	434.03	m/s	500.19	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.19	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.18	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.18	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.04	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
speedsl	434.03	m/s	500.03	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]

speedsl	537.22	m/s	597.89	Spherical resonator for vapor-phase speed of sound and measurements of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (RE347mcc) and trans-1,3,3,3-tetrafluoropropene [R1234ze(E)]
srf	0.02	N/m	100.00	KDB
svapt	85.58	J/molxK	99.54	NIST Webbook

Sources

Isobaric Heat Capacity Measurements of Liquid Methane, Ethane, and Argon by Differential Scanning Calorimetry at High Pressures and Low Temperatures: https://www.doi.org/10.1021/je300762m

Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K: Vapor Liquid Equilibrium for the Mixture Methane (CH4) + Ethane (C2H6) Over the Temperature Range (126.01 to 140.01) K: Development of a special single-sinker densimeter for cryogenic liquid https://www.doi.org/10.1021/je300843n

Accurate and Precise Methane Densities (300 to 450) K and 0 to 180 MPa: McGowan Method: http://webbook.nist.gov/cgi/cbook.cgi?ID=C74828&Units=SI

Investigation on Vapor-Liquid Equilibrium of (Argon + Methane) at the Vapor-Liquid Equilibrium (195 to 135) K: Mixture Nitrogen (N2) + Methane (CH4) Estimated Solubility Range of (110 to 125) K: Vapor-Liquid Equilibrium Data of the Methane + Tetrafluoromethane System at Temperatures from (159.61 to 178.93) K: Spherical resonator for vapor-phase speed of sound and measurements of Enthalpy of Vaporization of 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane and Ethane, and Methane-Ethane by Differential Scanning Calorimetry at Low Temperatures and High Pressures: https://www.doi.org/10.1021/je200371n

https://pubs.acs.org/doi/abs/10.1021/ci9903071

https://www.doi.org/10.1021/je300843n

https://www.doi.org/10.1016/j.jct.2015.09.034

https://www.doi.org/10.1021/je9004849

http://link.springer.com/article/10.1007/BF02311772

https://www.doi.org/10.1021/acs.jced.8b00280

https://www.doi.org/10.1021/je201299u

http://pubs.acs.org/doi/suppl/10.1021/ci034243x/suppl_file/ci034243xsi20040112_053635.txt

https://www.doi.org/10.1021/je0604030

https://www.thermo.com/files/research/kdb/mol/mol1.mol

https://www.doi.org/10.1016/j.jct.2015.07.005

https://www.doi.org/10.1021/acs.jced.6b00984

Legend

af:	Acentric Factor
affp:	Proton affinity
aiqt:	Autoignition Temperature
basg:	Gas basicity
chg:	Standard gas enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity

dm:	Dipole Moment
dvisc:	Dynamic viscosity
fl:	Lower Flammability Limit
flu:	Upper Flammability Limit
gf:	Standard Gibbs free energy of formation
gyrad:	Radius of Gyration
hf:	Enthalpy of formation at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hsubt:	Enthalpy of sublimation at a given temperature
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mccvol:	McGowan's characteristic volume
nfpaf:	NFPA Fire Rating
nfpah:	NFPA Health Rating
pc:	Critical Pressure
pt:	Triple Point Pressure
pvap:	Vapor pressure
rho:	Liquid Density
sg:	Molar entropy at standard conditions
speedsl:	Speed of sound in fluid
srf:	Surface Tension
svapt:	Entropy of vaporization at a given temperature
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume
zc:	Critical Compressibility
zra:	Rackett Parameter

Latest version available from:

<https://www.cheméo.com/cid/27-471-9/Methane.pdf>

Generated by Cheméo on 2022-10-02 00:33:04.73945704 +0000 UTC m=+206347.798397821.

Cheméo (<https://www.cheméo.com>) is the biggest free database of chemical and physical data for the process industry.