

Ethane, 1,1,2,2-tetrachloro-

Other names:	(CHCl ₂) ₂ 1,1,2,2-Czterochloroetan 1,1,2,2-TETRACHLOROETHANE 1,1,2,2-Tetrachloorethaan 1,1,2,2-Tetrachloraethan 1,1,2,2-Tetrachlorethane 1,1,2,2-Tetracloroetano 1,1-Dichloro-2,2-dichloroethane ACETYLENE TETRACHLORIDE Acetosol Bonoform Cellon Freon 130 NCI-C03554 NSC 60912 R-130 Rcra waste number U209 S-TETRACHLOROETHANE Tetrachlorethane Tetrachloroethane Tetrachlorure d'acetylene UN 1702 Westron sym-Tetrachloroethane
Inchi:	InChI=1S/C2H2Cl4/c3-1(4)2(5)6/h1-2H
InchiKey:	QPFMBZIOSGYJDE-UHFFFAOYSA-N
Formula:	C2H2Cl4
SMILES:	ClC(Cl)C(Cl)Cl
Mol. weight [g/mol]:	167.85
CAS:	79-34-5

Physical Properties

Property code	Value	Unit	Source
chl	-972.80 ± 8.40	kJ/mol	NIST Webbook
dm	1.50	debye	KDB
gf	-85.83	kJ/mol	KDB

hf	-156.70 ± 3.50	kJ/mol	NIST Webbook
hf	-155.60 ± 8.40	kJ/mol	NIST Webbook
hf	-152.80	kJ/mol	KDB
hfl	-202.40 ± 3.50	kJ/mol	NIST Webbook
hfl	-195.40 ± 8.40	kJ/mol	NIST Webbook
hfus	10.68	kJ/mol	Joback Method
hvap	45.78 ± 0.16	kJ/mol	NIST Webbook
hvap	45.80 ± 0.20	kJ/mol	NIST Webbook
hvap	45.72	kJ/mol	NIST Webbook
hvap	45.20 ± 1.30	kJ/mol	NIST Webbook
hvap	45.73 ± 0.09	kJ/mol	NIST Webbook
ie	11.10 ± 0.05	eV	NIST Webbook
ie	11.62	eV	NIST Webbook
log10ws	-1.74		Aqueous Solubility Prediction Method
log10ws	-1.74		Estimated Solubility Method
logp	2.594		Crippen Method
mcvol	88.000	ml/mol	McGowan Method
pc	5840.00	kPa	KDB
rinpol	876.00		NIST Webbook
rinpol	905.00		NIST Webbook
rinpol	876.00		NIST Webbook
rinpol	876.00		NIST Webbook
rinpol	888.00		NIST Webbook
rinpol	910.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	892.00		NIST Webbook
rinpol	876.00		NIST Webbook
rinpol	888.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	882.00		NIST Webbook
rinpol	865.00		NIST Webbook
rinpol	900.00		NIST Webbook
rinpol	892.00		NIST Webbook
rinpol	884.00		NIST Webbook
rinpol	877.00		NIST Webbook
rinpol	916.00		NIST Webbook
rinpol	922.10		NIST Webbook
rinpol	920.00		NIST Webbook
rinpol	876.00		NIST Webbook
rinpol	882.00		NIST Webbook
rinpol	886.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	888.40		NIST Webbook

rinpol	916.00		NIST Webbook
ripol	1555.00		NIST Webbook
ripol	1515.59		NIST Webbook
ripol	1511.30		NIST Webbook
ripol	1516.00		NIST Webbook
ripol	1513.66		NIST Webbook
ripol	1500.00		NIST Webbook
ripol	1475.00		NIST Webbook
ripol	1475.00		NIST Webbook
ripol	1516.00		NIST Webbook
sl	244.30	J/mol×K	NIST Webbook
sl	247.00	J/mol×K	NIST Webbook
tb	419.60	K	KDB
tb	418.35	K	Isobaric Vapor Liquid Equilibrium for Dimethylsulfoxide with Chloroethanes and Chloroethenes
tb	419.35	K	Vapor-Liquid Equilibria and Excess Molar Enthalpies for N-Methyl-2-pyrrolidone with Chloroethanes and Chloroethenes
tb	418.35	K	Excess molar enthalpies of dimethylsulfoxide with chloroethanes and chloroethenes at 298.15K
tb	419.25	K	Excess volumes and speeds of sound of mixtures of 1,2-dibromoethane with chlorinated ethanes and ethenes at 303.15 K
tc	644.50	K	NIST Webbook
tc	661.15	K	KDB
tf	229.70 ± 0.60	K	NIST Webbook
tf	229.70	K	Aqueous Solubility Prediction Method
tf	229.30	K	KDB
tt	230.30 ± 0.20	K	NIST Webbook
tt	230.80 ± 0.20	K	NIST Webbook
vc	0.332	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
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cpg	128.35	J/mol×K	499.80	Joback Method
cpg	124.85	J/mol×K	464.54	Joback Method
cpg	121.09	J/mol×K	429.27	Joback Method
cpg	117.05	J/mol×K	394.00	Joback Method
cpg	134.60	J/mol×K	570.34	Joback Method
cpg	131.60	J/mol×K	535.07	Joback Method
cpg	137.38	J/mol×K	605.61	Joback Method
cpl	168.00	J/mol×K	298.15	NIST Webbook
cpl	165.40	J/mol×K	298.15	NIST Webbook
cpl	165.40	J/mol×K	298.15	NIST Webbook
cpl	165.30	J/mol×K	298.00	NIST Webbook
dvisc	0.0005636	Pa×s	362.00	Joback Method
dvisc	0.0019792	Pa×s	265.99	Joback Method
dvisc	0.0011902	Pa×s	297.99	Joback Method
dvisc	0.0007899	Pa×s	329.99	Joback Method
dvisc	0.0037828	Pa×s	233.98	Joback Method
dvisc	0.0004249	Pa×s	394.00	Joback Method
dvisc	0.0088772	Pa×s	201.98	Joback Method
hfust	9.17	kJ/mol	230.80	NIST Webbook
hfust	0.54	kJ/mol	207.30	NIST Webbook
hfust	9.17	kJ/mol	230.80	NIST Webbook
hfust	9.52	kJ/mol	230.30	NIST Webbook
hfust	0.36	kJ/mol	204.80	NIST Webbook
hvapt	41.49	kJ/mol	419.20	KDB
hvapt	45.70	kJ/mol	361.50	NIST Webbook
hvapt	47.70	kJ/mol	350.50	NIST Webbook
hvapt	39.00	kJ/mol	415.00	NIST Webbook
hvapt	40.10	kJ/mol	397.50	NIST Webbook
hvapt	40.80	kJ/mol	395.00	NIST Webbook
hvapt	41.90	kJ/mol	396.00	NIST Webbook
hvapt	40.40	kJ/mol	398.00	NIST Webbook
hvapt	42.50	kJ/mol	380.50	NIST Webbook
hvapt	37.64	kJ/mol	419.40	NIST Webbook
pvap	2.86	kPa	323.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures

pvap	2.86	kPa	323.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures
pvap	95.50	kPa	417.25	Vapor-liquid equilibrium and excess Gibbs energies of some binary mixtures of acrylonitrile at 95.5 kPa
pvap	0.26	kPa	283.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures
pvap	0.37	kPa	288.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures
pvap	0.52	kPa	293.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures

pvap	0.71	kPa	298.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures
pvap	0.98	kPa	303.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures
pvap	1.29	kPa	308.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures
pvap	1.70	kPa	313.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures
pvap	2.24	kPa	318.15	Isothermal (vapour + liquid) equilibrium for binary mixtures of (tetrahydrofuran + 1,1,2,2-tetrachloroethane or tetrachloroethene) at nine temperatures

pvap	0.26	kPa	283.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachlorethane or tetrachloroethene with benzene at nine temperatures
pvap	0.37	kPa	288.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachlorethane or tetrachloroethene with benzene at nine temperatures
pvap	0.52	kPa	293.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachlorethane or tetrachloroethene with benzene at nine temperatures
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pvap	0.26	kPa	283.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures

pvap	0.37	kPa	288.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures
pvap	0.52	kPa	293.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures
pvap	2.24	kPa	318.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures
pvap	0.98	kPa	303.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures
pvap	1.29	kPa	308.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures

pvap	1.70	kPa	313.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures
pvap	0.71	kPa	298.15	Total vapour pressure and excess Gibbs energy for binary mixtures of 1,1,2,2-tetrachloroethane or tetrachloroethene with tetrachloromethane at nine temperatures
rfi	1.49400		293.15	Bubble points of the binary mixtures formed by ethylbenzene with some chloroaliphatics and substituted benzenes at p = 94.7 kPa
rfi	1.49400		293.15	Vapor-Liquid Equilibria of Binary Mixtures Formed by Hexan-1-ol with Chloroethanes and Chloroethenes at 95.6 kPa
rfi	1.48650		308.15	Density, Viscosity, Refractive Index, and Speed of Sound for Binary Mixtures of Anisole with 2-Chloroethanol, 1,4-Dioxane, Tetrachloroethylene, Tetrachloroethane, DMF, DMSO, and Diethyl Oxalate at (298.15, 303.15, and 308.15) K

rfi	1.48940	303.15	Density, Viscosity, Refractive Index, and Speed of Sound for Binary Mixtures of Anisole with 2-Chloroethanol, 1,4-Dioxane, Tetrachloroethylene, Tetrachloroethane, DMF, DMSO, and Diethyl Oxalate at (298.15, 303.15, and 308.15) K
rfi	1.49220	298.15	Density, Viscosity, Refractive Index, and Speed of Sound for Binary Mixtures of Anisole with 2-Chloroethanol, 1,4-Dioxane, Tetrachloroethylene, Tetrachloroethane, DMF, DMSO, and Diethyl Oxalate at (298.15, 303.15, and 308.15) K
rfi	1.49140	298.15	Bubble-Temperature Measurements on Some Binary Mixtures Formed by Tetrahydrofuran or Amyl Alcohol with Hydrocarbons, Chlorohydrocarbons, or Butanols at (94.6 or 95.8) kPa
rfi	1.49400	293.15	Excess Gibbs energies of selected binary mixtures formed by N,N-dimethyl formamide at 95.5 kPa

rfi	1.49400	298.15	Bubble Temperature Measurements on the Binary Mixtures of n-Heptane or Nitrobenzene or Chlorobenzene with Some Chloroethanes and Chloroethylenes at (94.6 to 95.8) kPa
rfi	1.49140	298.15	Bubble Temperature Measurements on Binary Mixtures Formed by Cyclohexane at 94.7 kPa
rfi	1.48810	303.15	Densities, speeds of sound, isentropic compressibilities, refractive indexes, and viscosities of tetrahydrofuran with haloalkane or alkyl ethanoate at T = 303.15 K
rfi	1.49400	293.15	Activity coefficients and excess Gibbs free energy of some binary mixtures formed by p-cresol at 95.23 kPa
rfi	1.49400	293.15	Bubble points of some binary mixtures formed by o-cresol at 95.75 kPa
rfi	1.49200	298.15	Isothermal (vapour + liquid) equilibria for the binary (cyclopentanone or cyclohexanone with 1,1,2,2-tetrachloroethane) systems at temperatures of (343.15, 353.15, and 363.15) K

rfi	1.49387		293.15	Densities, excess molar volumes, and refractive indices of 1,1,2,2-tetrachloroethane and 1-alkanols binary mixtures
rfi	1.48887		303.15	Densities, excess molar volumes, and refractive indices of 1,1,2,2-tetrachloroethane and 1-alkanols binary mixtures
rhoI	1570.60	kg/m3	308.15	Excess Molar Volumes and Sound Speed in (Phenylacetonitrile + 1,2-Dichloroethane), (Phenylacetonitrile + 1,1,2-Trichloroethane), (Phenylacetonitrile + 1,1,2,2-Tetrachloroethane), (Phenylacetonitrile + Trichloroethene), and (Phenylacetonitrile + Tetrachloroethene) at Temperatures of (303.15, 308.15, and 313.15) K
rhoI	1600.00	kg/m3	293.00	KDB
rhoI	1573.57	kg/m3	308.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclohexanone with Chloroalkanes at Temperatures between (288.15 and 318.15) K
rhoI	1557.94	kg/m3	318.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclohexanone with Chloroalkanes at Temperatures between (288.15 and 318.15) K

rhoI	1586.80	kg/m3	298.15	Excess Molar Volumes and Sound Speed in (Phenylacetonitrile + 1,2-Dichloroethane), (Phenylacetonitrile + 1,1,2-Trichloroethane), (Phenylacetonitrile + 1,1,2,2-Tetrachloroethane), (Phenylacetonitrile + Trichloroethene), and (Phenylacetonitrile + Tetrachloroethene) at Temperatures of (303.15, 308.15, and 313.15) K
rhoI	1579.60	kg/m3	303.15	Excess Molar Volumes and Sound Speed in (Phenylacetonitrile + 1,2-Dichloroethane), (Phenylacetonitrile + 1,1,2-Trichloroethane), (Phenylacetonitrile + 1,1,2,2-Tetrachloroethane), (Phenylacetonitrile + Trichloroethene), and (Phenylacetonitrile + Tetrachloroethene) at Temperatures of (303.15, 308.15, and 313.15) K

rhoI	1563.70	kg/m3	313.15	Excess Molar Volumes and Sound Speed in (Phenylacetonitrile + 1,2-Dichloroethane), (Phenylacetonitrile + 1,1,2-Trichloroethane), (Phenylacetonitrile + 1,1,2,2-Tetrachloroethane), (Phenylacetonitrile + Trichloroethene), and (Phenylacetonitrile + Tetrachloroethene) at Temperatures of (303.15, 308.15, and 313.15) K
rhoI	1604.78	kg/m3	288.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclopentanone with Chloroalkanes at T = (288.15, 298.15, 308.15, and 318.15) K
rhoI	1589.19	kg/m3	298.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclopentanone with Chloroalkanes at T = (288.15, 298.15, 308.15, and 318.15) K
rhoI	1573.59	kg/m3	308.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclopentanone with Chloroalkanes at T = (288.15, 298.15, 308.15, and 318.15) K

rhoI	1557.95	kg/m3	318.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclopentanone with Chloroalkanes at T = (288.15, 298.15, 308.15, and 318.15) K
rhoI	1578.07	kg/m3	303.15	Volumetric properties of binary liquid mixtures of ketones with chloroalkanes at different temperatures and atmospheric pressure
rhoI	1594.57	kg/m3	293.20	Isobaric vapour liquid equilibria for binary mixtures of 1,2-dibromoethane with 1,2-dichloroethane, trichloromethane, and 1,1,2,2-tetrachloroethane at atmospheric pressure
rhoI	1586.22	kg/m3	298.15	Thermodynamic study of 1,1,2,2-tetrachloroethane + hydrocarbon mixtures I. Excess and solvation enthalpies
rhoI	1587.60	kg/m3	298.15	Volumetric and optical properties for some (2-butanone + chloroalkane) binary mixtures at T = 298.15 K
rhoI	1589.18	kg/m3	298.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclohexanone with Chloroalkanes at Temperatures between (288.15 and 318.15) K

rhoI	1604.75	kg/m3	288.15	Densities and Excess Molar Volumes of the Binary Mixtures of Cyclohexanone with Chloroalkanes at Temperatures between (288.15 and 318.15) K
rhoI	1601.45	kg/m3	288.15	Volumetric properties of binary liquid mixtures of ketones with chloroalkanes at different temperatures and atmospheric pressure
rhoI	1572.66	kg/m3	308.15	Volumetric Study for the Binary Nitromethane with Chloroalkane Mixtures at Temperatures in the Range (298.15 to 318.15) K
rhoI	1588.23	kg/m3	298.15	Volumetric Study for the Binary Nitromethane with Chloroalkane Mixtures at Temperatures in the Range (298.15 to 318.15) K
rhoI	1556.07	kg/m3	318.15	Densities and Excess Molar Volumes of the Ternary System (1,4-Dioxane + 2-Propanol + 1,1,2,2-Tetrachloroethane) at T = 288.15-318.15 K and at Atmospheric Pressure: Experimental Measurements and Prigogine-Flory-Patterson Modeling

rhoI	1571.63	kg/m3	308.15	Densities and Excess Molar Volumes of the Ternary System (1,4-Dioxane + 2-Propanol + 1,1,2,2-Tetrachloroethane) at T = 288.15-318.15 K and at Atmospheric Pressure: Experimental Measurements and Prigogine-Flory-Patterson Modeling
rhoI	1587.20	kg/m3	298.15	Densities and Excess Molar Volumes of the Ternary System (1,4-Dioxane + 2-Propanol + 1,1,2,2-Tetrachloroethane) at T = 288.15-318.15 K and at Atmospheric Pressure: Experimental Measurements and Prigogine-Flory-Patterson Modeling
rhoI	1585.87	kg/m3	298.15	Volumetric properties of binary liquid mixtures of ketones with chloroalkanes at different temperatures and atmospheric pressure
rhoI	1562.45	kg/m3	313.15	Volumetric properties of binary liquid mixtures of ketones with chloroalkanes at different temperatures and atmospheric pressure
rhoI	1570.27	kg/m3	308.15	Volumetric properties of binary liquid mixtures of ketones with chloroalkanes at different temperatures and atmospheric pressure

rhoI	1557.04	kg/m3	318.15	Volumetric Study for the Binary Nitromethane with Chloroalkane Mixtures at Temperatures in the Range (298.15 to 318.15) K
rhoI	1593.65	kg/m3	293.15	Volumetric properties of binary liquid mixtures of ketones with chloroalkanes at different temperatures and atmospheric pressure
rhoI	1602.77	kg/m3	288.15	Densities and Excess Molar Volumes of the Ternary System (1,4-Dioxane + 2-Propanol + 1,1,2,2-Tetrachloroethane) at T = 288.15-318.15 K and at Atmospheric Pressure: Experimental Measurements and Prigogine-Flory-Patterson Modeling
sfust	2.62	J/mol×K	207.30	NIST Webbook
sfust	41.50	J/mol×K	230.30	NIST Webbook
sfust	1.74	J/mol×K	204.80	NIST Webbook
sfust	39.74	J/mol×K	230.80	NIST Webbook
speedsl	1087.00	m/s	318.15	Speeds of sound, isentropic compressibilities and refractive indices for some binary mixtures of nitromethane with chloroalkane at temperatures from 298.15 to 318.15 K. Comparison with theories

speedsl	1150.61	m/s	298.15	Speeds of sound, isentropic compressibilities and refractive indices for some binary mixtures of nitromethane with chloroalkane at temperatures from 298.15 to 318.15 K. Comparison with theories
speedsl	1118.66	m/s	308.15	Speeds of sound, isentropic compressibilities and refractive indices for some binary mixtures of nitromethane with chloroalkane at temperatures from 298.15 to 318.15 K. Comparison with theories
srf	0.03	N/m	293.20	KDB

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.38082e+01
Coeff. B	-3.15431e+03
Coeff. C	-7.60640e+01
Temperature range (K), min.	309.36
Temperature range (K), max.	447.30

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	1.48935e+02
Coeff. B	-1.09840e+04
Coeff. C	-1.99490e+01
Coeff. D	1.34830e-05
Temperature range (K), min.	229.35
Temperature range (K), max.	661.00

Datasets

Viscosity, Pa*s

Temperature, K - Liquid	Pressure, kPa - Liquid	Viscosity, Pa*s - Liquid
308.15	101.00	0.0013340
Reference		https://www.doi.org/10.1016/j.jct.2006.06.009

Sources

Densities and viscosities of binary liquid mixtures of N-methylacetamide with some chloroalkanes and excess Gibbs free energies of some binary mixtures of methyl acetate and chloroalkanes for some (2-butanone + chloroalkane) binary mixtures at $T = 298.15$ K: Constants Using Internal Standards Vapor-liquid equilibria and excess Gibbs energies of some binary mixtures of acrylonitrile at 95.5 kPa:

<https://www.doi.org/10.1016/j.jct.2006.06.009>

<https://www.doi.org/10.1016/j.jct.2006.12.017>

<https://www.doi.org/10.1016/j.jct.2014.04.004>

<https://www.doi.org/10.1021/je3010535>

<https://www.doi.org/10.1016/j.fluid.2008.03.020>

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Densities and Excess Molar Volumes of the Binary Mixtures of Cyclopentanone with Chloroalkanes at $T = 298.15$ and 318.15 K: Vapor-liquid equilibria and binary mixtures formed by Hexes-1-ol with chloroalkanes and chloroethers at $T = 298.15$ K: Molar Enthalpies for N-methylacetamide, Refractive Index, and Speed of Sound for Binary Mixtures of Hexes-1-ol with chloroalkanes and chloroethers at $T = 298.15$ K: Excess Gibbs free energies of binary mixtures of pentyl acetate, hexyl acetate, and heptyl acetate with chloroalkanes at $T = 298.15$ K: Excess Gibbs free energies of binary mixtures of pentyl acetate, hexyl acetate, and heptyl acetate with chloroalkanes at $T = 298.15$ K: Joback Method:

<https://www.doi.org/10.1021/je901052w>

<https://www.doi.org/10.1016/j.jct.2005.06.015>

<https://www.doi.org/10.1021/je9000608>

<https://www.doi.org/10.1021/je020065c>

<https://www.doi.org/10.1021/je049610v>

<https://www.doi.org/10.1016/j.jct.2004.11.013>

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Densities, speeds of sound, isentropic compressibilities, refractive indexes, and viscosities of the binary mixtures formed by ethylhexanoate with some chloroalkanes and substituted benzene at $T = 298.15$ K: Binary liquid mixtures of chloroalkanes and chloroethers at $T = 298.15$ K: Measurements on the Binary Mixtures of n-Heptane or n-Heptane with chloroalkanes at $T = 298.15$ K: Bubble Temperature Measurements on Some Binary Mixtures Formed by Chloroalkanes and Chloroethers at $T = 298.15$ K: Vapor-liquid equilibria and binary mixtures of pentyl acetate, hexyl acetate, and heptyl acetate with chloroalkanes at $T = 298.15$ K: Comparison with theories:

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KDB:

Volumetric Study for the Binary Nitromethane with Chloroalkane Mixtures at Temperatures in the Range (298.15 to 318.15) K:
Excess molar enthalpies of dimethylsulfoxide with chloroethanes and chloropropanes as binary liquid mixtures of ketones with chloroalkanes at different temperatures and sound speeds in Phenylacetonitrile + 1,2-dichloroethane, Phenylacetonitrile + 1,2-dibromoethane, and 1,2-dibromoethane + 1,2-dichloroethane, and thermodynamic modeling of the mixtures of the thermodynamic properties of binary mixtures of hexanol with chloroethane (5-methyl-2-pentanol) at 100°C of the Ternary System (1,4-Dioxane + 2-Propanol + 2,2,2-Trichloroethane) for binary mixtures of (tetrahydrofuran + 2-propanol) and (2-propanol + 1,2-dichloroethane) at nine temperatures. Experimental excess Gibbs energies of selected binary mixtures formed by a cubic equation of state and binary mixtures formed by o-cresol at 95.75 kPa: McGowan Method:

Total vapour pressure and excess Gibbs energy for binary mixtures of 1,2-dichloroethane with 1,2-dibromoethane, 1,2-dibromoethane with 1,2-dichloroethane and 1,2-dibromoethane with 1,2-dichloroethane at nine temperatures. Experimental excess Gibbs energies of selected binary mixtures formed by a cubic equation of state and binary mixtures formed by o-cresol at 95.75 kPa: McGowan Method:

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Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dm:	Dipole Moment
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
vpap:	Vapor pressure

rfi:	Refractive Index
rho:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
speedsl:	Speed of sound in fluid
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume

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