Hydrogen sulfide

Other names:	Acide sulfhydrique
	DIHYDROGEN MONOSULFIDE
	Dihydrogen sulfide
	H2S
	HYDROSULFURIC ACID
	Hepatic acid
	Hepatic gas
	Hydrogen monosulfide
	Hydrogen sulfide (H2S)
	Hydrogen sulphide
	Hydrogene sulfure
	Idrogeno solforato
	Rcra waste number U135
	SULFUR HYDRIDE
	Schwefelwasserstoff
	Sewer gas
	Siarkowodor
	Stink damp
	Sulfureted hydrogen
	Sulfuretted hydrogen
	UN 1053
	Zwavelwaterstof
Inchi:	InChI=1S/H2S/h1H2
InchiKey:	RWSOTUBLDIXVET-UHFFFAOYSA-N
Formula:	H2S
SMILES:	S
Mol. weight [g/mol]:	34.08
CAS:	7783-06-4

Physical Properties

Property code	Value	Unit	Source
af	0.0810		KDB
affp	705.00	kJ/mol	NIST Webbook
basg	673.80	kJ/mol	NIST Webbook
dm	0.90	debye	KDB
gf	-33.08	kJ/mol	KDB

gyrad	0.6040		KDB
hf	20.18	kJ/mol	KDB
hf	-20.60 ± 0.50	kJ/mol	NIST Webbook
ie	10.45 ± 0.01	eV	NIST Webbook
ie	10.43	eV	NIST Webbook
ie	10.43	eV	NIST Webbook
ie	10.50	eV	NIST Webbook
ie	10.47 ± 0.01	eV	NIST Webbook
ie	10.47	eV	NIST Webbook
ie	10.45	eV	NIST Webbook
ie	10.43	eV	NIST Webbook
ie	10.46 ± 0.01	eV	NIST Webbook
ie	10.45 ± 0.03	eV	NIST Webbook
ie	20.12	eV	NIST Webbook
ie	10.50	eV	NIST Webbook
ie	12.76	eV	NIST Webbook
ie	10.47	eV	NIST Webbook
ie	10.56 ± 0.05	eV	NIST Webbook
ie	18.00	eV	NIST Webbook
ie	14.82	eV	NIST Webbook
ie	10.48	eV	NIST Webbook
ie	12.62	eV	NIST Webbook
ie	10.47 ± 0.00	eV	NIST Webbook
ie	14.91	eV	NIST Webbook
ie	10.48	eV	NIST Webbook
ie	10.00 ± 4.00	eV	NIST Webbook
ie	10.45 ± 0.01	eV	NIST Webbook
ie	10.46 ± 0.00	eV	NIST Webbook
ie	10.42	eV	NIST Webbook
ie	10.43 ± 0.01	eV	NIST Webbook
ie	12.81	eV	NIST Webbook
ie	14.79	eV	NIST Webbook
ie	10.46 ± 0.01	eV	NIST Webbook
ie	18.00	eV	NIST Webbook
ie	20.80	eV	NIST Webbook
log10ws	-0.08		Crippen Method
logp	0.113		Crippen Method
mcvol	27.210	ml/mol	McGowan Method
nfpaf	%!d(float64=4)		KDB
nfpah	%!d(float64=3)		KDB
pc	8940.00	kPa	KDB
pc	8970.00 ± 18.00	kPa	NIST Webbook
pc	8962.91 ± 30.00	kPa	NIST Webbook
pt	23.20 ± 0.50	kPa	NIST Webbook

pt	23.18	kPa	KDB
rhoc	347.63 ± 3.41	kg/m3	NIST Webbook
rinpol	340.00		NIST Webbook
rinpol	338.00		NIST Webbook
rinpol	338.00		NIST Webbook
ripol	480.00		NIST Webbook
ripol	480.00		NIST Webbook
ripol	480.00		NIST Webbook
sgb	205.81 ± 0.05	J/mol×K	NIST Webbook
tb	213.60	K	KDB
tb	212.87 ± 0.07	K	NIST Webbook
tc	373.40 ± 0.15	K	NIST Webbook
tc	373.30 ± 0.37	K	NIST Webbook
tc	373.20	K	KDB
tf	190.85 ± 1.50	K	NIST Webbook
tf	187.60	K	KDB
tt	187.66 ± 0.06	K	NIST Webbook
tt	187.67	K	KDB
tt	187.61 ± 0.03	K	NIST Webbook
vc	0.099	m3/kmol	KDB
zc	0.2852290		KDB
zra	0.28		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
dvisc	0.0000188	Pa×s	461.92	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000119	Pa×s	291.61	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000119	Pa×s	292.30	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000268	Pa×s	682.03	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000268	Pa×s	681.36	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000258	Pa×s	652.32	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000258	Pa×s	652.30	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000248	Pa×s	623.19	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000248	Pa×s	623.07	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000119	Pa×s	292.46	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000238	Pa×s	594.02	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000238	Pa×s	593.95	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000228	Pa×s	565.29	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000227	Pa×s	565.19	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000219	Pa×s	542.61	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000219	Pa×s	542.48	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000210	Pa×s	518.75	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000210	Pa×s	518.68	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000199	Pa×s	490.20	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000121	Pa×s	297.01	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000119	Pa×s	292.77	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000188	Pa×s	461.72	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000177	Pa×s	433.81	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000177	Pa×s	433.66	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000166	Pa×s	405.86	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000166	Pa×s	405.76	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000154	Pa×s	378.19	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000154	Pa×s	378.01	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000143	Pa×s	350.59	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000132	Pa×s	323.96	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K

dvisc	0.0000143	Pa×s	350.47	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000132	Pa×s	323.94	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000199	Pa×s	490.09	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
dvisc	0.0000121	Pa×s	296.89	Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K
hsubt	25.40	kJ/mol	175.50	NIST Webbook
hsubt	22.50	kJ/mol	135.00	NIST Webbook
hvapt	19.50	kJ/mol	206.50	NIST Webbook
hvapt	21.90	kJ/mol	200.00	NIST Webbook
hvapt	18.60	kJ/mol	295.50	NIST Webbook
pvap	2024.00	kPa	298.40	Measurement of VLE (TPx or TPxy data) for hydrogen sulfide + (dimethylsulfide or ethylmethylsulfide or carbon disulfide) and methane solubilities in (dimethylsulfide or ethylmethylsulfide or methylmercaptan or ethylmercaptan)

pvap	384.00	kPa	243.02	Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures
pvap	167.30	kPa	222.83	Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures
pvap	1029.30	kPa	273.13	Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures
pvap	1030.20	kPa	273.12	Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures
pvap	379.40	kPa	243.20	Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures
pvap	380.20	kPa	243.18	Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures

pvap	5812.00	kPa	348.45	Measurement of VLE (TPx or TPxy data) for hydrogen sulfide + (dimethylsulfide or ethylmethylsulfide or carbon disulfide) and methane solubilities in (dimethylsulfide or ethylmethylsulfide or methylmercaptan or ethylmercaptan)
pvap	1793.70	kPa	293.43	Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures
pvap	3564.00	kPa	323.50	Measurement of VLE (TPx or TPxy data) for hydrogen sulfide + (dimethylsulfide or ethylmethylsulfide or carbon disulfide) and methane solubilities in (dimethylsulfide or ethylmethylsulfide or methylmercaptan or ethylmercaptan)
pvap	1033.00	kPa	273.08	Measurement of VLE (TPx or TPxy data) for hydrogen sulfide + (dimethylsulfide or ethylmethylsulfide or carbon disulfide) and methane solubilities in (dimethylsulfide or ethylmethylsulfide or methylmercaptan or ethylmercaptan)

pvap	8932.10	kPa	373.15	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	7533.00	kPa	363.16	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	6319.20	kPa	353.17	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	5261.20	kPa	343.16	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	4339.50	kPa	333.17	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa

pvap	3540.40	kPa	323.18	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	2847.20	kPa	313.11	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	2259.60	kPa	303.08	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	2022.20	kPa	298.41	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	1779.50	kPa	293.30	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	

pvap	1767.90	kPa	293.10	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	1566.60	kPa	288.31	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	1371.10	kPa	283.26	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	1194.10	kPa	278.24	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	1032.30	kPa	273.17	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa

pvap	885.70	kPa	268.02	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	757.70	kPa	263.00	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	644.50	kPa	258.01	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	456.70	kPa	248.01	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	
pvap	380.10	kPa	243.04	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa	

pvap	313.90	kPa	238.04	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	257.40	kPa	233.11	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	209.10	kPa	228.20	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	167.40	kPa	223.19	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
pvap	544.20	kPa	252.97	Vapour liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 6.9MPa
rhol	906.00	kg/m3	222.00	KDB

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43785e+01
Coeff. B	-1.84720e+03
Coeff. C	-2.35400e+01
Temperature range (K), min.	187.68
Temperature range (K), max.	373.53

Sources

P.rho.T Data for Hydrogen Sulfide + Propane from (263 to 363) K at Pressures up to 40 MPa:	https://www.doi.org/10.1021/je100851w
Solubility of H2S in Ionic Liquids 1-Ethyl-3-methylimidazolium Hexafluorophosphate ([emim][PF6]) and 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide ([emim][Tf2N]):	https://www.doi.org/10.1021/je100794k
Solubility of Hydrogen Sulfide in Aqueous Solutions of Piperazine in the Low Pressure Region:	https://www.doi.org/10.1021/je900721q
Measurement and correlation of the diffusion coefficient of H2S in liquid sulfur:	https://www.doi.org/10.1016/j.fluid.2011.04.010
Vapour-liquid equilibrium data for the hydrogen sulphide + n-heptane system at temperatures from 293.25 to 373.22K and pressures up to about 10 MPa:	https://www.doi.org/10.1016/j.fluid.2006.09.021
Solubility of H2S in 1-(2-hydroxyethyl)-3-methylimidazolium ionic liquids with different anions:	https://www.doi.org/10.1016/j.fluid.2010.08.027
KDB:	https://www.cheric.org/files/research/kdb/mol/mol1917.mol
Phase Equilibria of H2S-Hydrocarbons (Propane, n-Butane, and n-Pentane) Binary Systems at Low Temperatures:	https://www.doi.org/10.1021/je300111m
Experimental study and phase equilibrium modeling of systems containing acid gas and glycol :	https://www.doi.org/10.1016/j.fluid.2011.12.025
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Vapour pressure and excess Gibbs free energy of binary mixtures of hydrogen sulphide with ethane, propane, and n-butane at temperature of 182.33 K:	https://www.doi.org/10.1016/j.jct.2006.03.013
Solubility of CO2 and H2S in the ionic liquid 1-ethyl-3-methylimidazolium tris(pentafluoroethyl)trifluorophosphate:	https://www.doi.org/10.1016/j.jct.2013.07.022
Experimental study and thermodynamical modeling of the solubilities of SO2, H2S and CO2in 1-octyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide ionic liquid:	https://www.doi.org/10.1016/j.fluid.2014.06.026
Solubility of H2S and CO2 in imidazolium-based ionic liquids with [OTf] anion:	https://www.doi.org/10.1016/j.jct.2018.10.013
Solubility of Hydrogen Sulfide in Ethanediol, 1,2-Propanediol, and 1,2-Propanediol + Water:	https://www.doi.org/10.1021/acs.jced.5b00680
An evaluation of their potential application in the separation of acidic gases: Experimental measurement and modeling of the 0.9505 CO2 + 0.0495 H2S mixture from 278 K to 338 K and pressures up to about 12 MPa:	https://www.doi.org/10.1021/je900716q
Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S):	https://www.doi.org/10.1016/j.fluid.2016.04.024
Vapour-liquid equilibrium data for the hydrogen sulphide (H2S) + carbon dioxide (CO2) system at temperatures from 263 to 313 K:	https://www.doi.org/10.1016/j.fluid.2014.09.025
Evaluation of Methanesulfonate Based Deep Eutectic Solvent for Ammonia Separation:	https://www.doi.org/10.1016/j.jct.2015.01.001
Solubility of carbon dioxide and hydrogen sulfide in the ionic liquid 1-butyl-3-methylimidazolium trifluoromethanesulfonate:	https://www.doi.org/10.1016/j.fluid.2013.07.050
Solubility of H2S in ionic liquids [hmim][PF6], [hmim][BF4], and [hmim][Tf2N]:	https://www.doi.org/10.1016/j.jct.2012.02.009
	https://www.doi.org/10.1021/acs.jced.7b01004
	https://www.doi.org/10.1016/j.fluid.2017.09.003
	https://www.doi.org/10.1016/j.jct.2009.04.014

Measuring the density and viscosity of H2S-loaded aqueous methyldiethanolamine solution:	https://www.doi.org/10.1016/j.jct.2016.06.007
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Reference Viscosities of Gaseous Methane and Hydrogen Sulfide at Low Density in the Temperature Range from (292 to 682) K:	https://www.doi.org/10.1021/je200371n
Solubility of Hydrogen Sulfide in [bmim][PF6]:	https://www.doi.org/10.1007/s10765-007-0185-z
High pressure measurement and CPA equation of state for solubility of carbon dioxide and hydrogen sulfide in 1-butyl-3-methylimidazolium acetate:	https://www.doi.org/10.1016/j.jct.2015.04.032
Measuring and modelling the absorption and volumetric properties of CO2 and H2S in the ionic liquid 1-ethyl-3-methylimidazolium tetrafluoroborate:	https://www.doi.org/10.1016/j.jct.2018.12.005
The solubility of H2S in liquid sulfur:	https://www.doi.org/10.1016/j.fluid.2008.05.001
Study of the solubility of CO2, H2S and their mixture in the ionic liquid 1-octyl-3-methylimidazolium hexafluorophosphate: Experimental and modelling:	https://www.doi.org/10.1016/j.jct.2013.05.038
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7783064&Units=SI
Measurements of H2S solubility in aqueous diisopropanolamine solutions and vapour pressure of diisopropanolamine:	https://www.doi.org/10.1016/j.fluid.2012.11.009
Experimental investigation of hydrogen sulfide solubility in aqueous sulfolane solution:	https://www.doi.org/10.1016/j.jct.2016.11.025
Solubility of H2S in Aqueous Diisopropanolamine + Piperazine Solutions: New Experimental Data and Modeling with the Electrolyte Cubic Square-Well Equation of State:	https://www.doi.org/10.1021/je2005243
Isothermal Vapor–Liquid Equilibrium (VLE) and Vapor–Liquid–Liquid Equilibrium (VLLE) Data for Two Binary Systems Containing Perfluorohexane with Carbon Monoxide or Hydrogen Sulfide [illegible] K:	https://www.doi.org/10.1021/acs.jced.5b00318
Measurement of VLE (TPx or TPxy data) for hydrogen sulfide + [illegible] solubilities in (dimethylsulfide or ethylmethylsulfide or methylmercaptan or ethylmercaptan):	https://www.doi.org/10.1016/j.fluid.2007.07.013
Experimental solubility of carbon dioxide and hydrogen sulfide in [illegible]:	https://www.doi.org/10.1016/j.jct.2019.02.024
Solubility of H2S in Ionic Liquids [bmim][PF6], [bmim][BF4], and [bmim][Tf2N]:	https://www.doi.org/10.1021/je8009495
The Solubility of Hydrogen Sulfide and Carbon Dioxide in Propylene Carbonate:	https://www.doi.org/10.1021/acs.jced.5b00669
Experimental and modelling investigation of H2S solubility in N-methylimidazole and gamma-butyrolactone:	https://www.doi.org/10.1016/j.jct.2019.03.031
Experimental and modelling study of the densities of the hydrogen sulphide + methane mixtures at 253, 273 and 293 K and pressures up to 30 MPa:	https://www.doi.org/10.1016/j.fluid.2016.08.002
Isothermal Vapor Liquid Equilibrium Data and Thermodynamic Modeling for Binary Systems of Perfluorobutane (R610) + (Methane or Hydrogen Sulfide) at (293, 313, and 333) K:	https://www.doi.org/10.1021/je500496y
Separation of CO2 and H2S using room-temperature ionic liquid [bmim][PF6]:	https://www.doi.org/10.1016/j.fluid.2010.01.013
Experimental diffusion coefficients of CO2 and H2S in some ionic liquids using semi-infinite volume method:	https://www.doi.org/10.1016/j.jct.2019.02.022
P-rho-T and VLE for Ethane + Hydrogen Sulfide from (254.05 to 363.21) K at Pressures up to 20 MPa:	https://www.doi.org/10.1021/je050157c
Solubility of Hydrogen Sulfide in N-Methylacetamide and N,N-Dimethylacetamide: Experimental Measurement and Modeling:	https://www.doi.org/10.1021/je500478t
Measuring and correlating solubility of hydrogen sulfide in aqueous solution of 2-((2-aminoethyl)amino)ethanol:	https://www.doi.org/10.1016/j.jct.2017.11.014
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Experimental solubility of hydrogen sulfide and carbon dioxide in dimethylformamide and dimethylsulfoxide:	https://www.doi.org/10.1016/j.fluid.2014.01.020
Separation of CO2 and H2S Using Room-Temperature Ionic Liquid [bmim][MeSO4]:	https://www.doi.org/10.1021/je1004005
Measuring solubility of hydrogen sulphide in aqueous blends of N-methyldiethanolamine and 2-((2 aminoethyl)amino)ethanol and correlating by the Deshmukh-Mather model:	https://www.doi.org/10.1016/j.jct.2016.04.012

Legend

af:	Acentric Factor
affp:	Proton affinity
basg:	Gas basicity
dm:	Dipole Moment
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
gyrad:	Radius of Gyration
hf:	Enthalpy of formation at standard conditions
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
mcvol:	McGowan's characteristic volume
nfpaf:	NFPA Fire Rating
nfpah:	NFPA Health Rating
pc:	Critical Pressure
pt:	Triple Point Pressure
pvap:	Vapor pressure
rhoc:	Critical density
rhol:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
sgb:	Molar entropy at standard conditions (1 bar)
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