Silane, diethoxydimethyl-

Other names:	CD5600
	Diethoxydimethylsilane
	Dimethyl-diethoxysilan
	Dimethyldiethoxysilane
	EXP-49
	Silane, dimethyl, diethoxy
	UN 2380
Inchi:	InChI=1S/C6H16O2Si/c1-5-7-9(3,4)8-6-2/h5-6H2,1-4H3
InchiKey:	YYLGKUPAFFKGRQ-UHFFFAOYSA-N
Formula:	C6H16O2Si
SMILES:	CCO[Si](C)(C)OCC
Mol. weight [g/mol]:	148.28
CAS:	78-62-6

Physical Properties

Property code	Value	Unit	Source
hvap	43.10 ± 0.70	kJ/mol	NIST Webbook
hvap	43.10 ± 0.30	kJ/mol	NIST Webbook
log10ws	0.86		Crippen Method
logp	1.761		Crippen Method
rinpol	678.00		NIST Webbook
rinpol	678.00		NIST Webbook
rinpol	678.00		NIST Webbook
tb	387.00	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hvapt	43.30	kJ/mol	320.00	NIST Webbook

rhol	840.11	kg/m3	293.15	Excess molar volume along with refractive index for binary systems of dimethoxymethylphenylsilane with dimethyldimethoxysilane, dimethyldiethoxylsilane, methylvinyldiethoxysilane and ethenyltrimethoxysilane
rhol	835.43	kg/m3	298.15	Excess molar volume along with refractive index for binary systems of dimethoxymethylphenylsilane with dimethyldimethoxysilane, dimethyldiethoxylsilane, methylvinyldiethoxysilane and ethenyltrimethoxysilane
rhol	830.05	kg/m3	303.15	Excess molar volume along with refractive index for binary systems of dimethoxymethylphenylsilane with dimethyldimethoxysilane, dimethyldiethoxylsilane, methylvinyldiethoxysilane and ethenyltrimethoxysilane
rhol	824.66	kg/m3	308.15	Excess molar volume along with refractive index for binary systems of dimethoxymethylphenylsilane with dimethyldimethoxysilane, dimethyldiethoxylsilane, methylvinyldiethoxysilane and ethenyltrimethoxysilane
rhol	819.23	kg/m3	313.15	Excess molar volume along with refractive index for binary systems of dimethoxymethylphenylsilane with dimethyldimethoxysilane, dimethyldiethoxylsilane, methylvinyldiethoxysilane and ethenyltrimethoxysilane

rhol	813.79	kg/m3	318.15	Excess molar volume along with refractive index for binary systems of dimethoxymethylphenylsilane with dimethyldimethoxysilane, dimethyldiethoxylsilane, methylvinyldiethoxysilane and ethenyltrimethoxysilane

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.41699e+01
Coeff. B	-3.07415e+03
Coeff. C	-6.53020e+01
Temperature range (K), min.	286.75
Temperature range (K), max.	412.33

Sources

Excess molar volume along with refractive index for binary systems of dimethoxymethylphenylsilane with dimethyldimethoxysilane, dimethyldiethoxylsilane, methylvinyldiethoxysilane and ethenyltrimethoxysilane:	https://www.doi.org/10.1016/j.jct.2016.10.033
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C78626&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
pvap:	Vapor pressure

rhol:	Liquid Density
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature