

Eicosamethylnonasiloxane

Other names:	1,1,1,3,3,5,5,7,7,9,9,11,11,13,13,15,15,17,17,17-eicosamethylnonasiloxane icosamethylnonasiloxane
Inchi:	InChI=1S/C20H60O8Si9/c1-29(2,3)21-31(7,8)23-33(11,12)25-35(15,16)27-37(19,20)28-3
InchiKey:	XVNZQBSRKFXKSM-UHFFFAOYSA-N
Formula:	C20H60O8Si9
SMILES:	C[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)
Mol. weight [g/mol]:	681.46
CAS:	2652-13-3

Physical Properties

Property code	Value	Unit	Source
log10ws	12.57		Crippen Method
logp	7.702		Crippen Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hvapt	85.90	kJ/mol	499.00	NIST Webbook
pvap	4.16e-04	kPa	348.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	1.10e-03	kPa	358.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	2.75e-03	kPa	368.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers

pvap	6.57e-03	kPa	378.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.01	kPa	388.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.03	kPa	398.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.07	kPa	408.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.14	kPa	418.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.28	kPa	428.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.53	kPa	438.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$

Coeff. A	1.92650e+01
Coeff. B	-7.60095e+03
Coeff. C	-6.16940e+01
Temperature range (K), min.	462.22
Temperature range (K), max.	606.43

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers:	https://www.doi.org/10.1021/je100835n
NIST Webbook	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2652133&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

Legend

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

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