Nonanedioic acid, bis(2-ethylhexyl) ester

Other names:	Azelaic acid, bis(2-ethylhexyl) ester
	Azelaic acid, di(2-ethylhexyl) ester
	Bis(2-ethylhexyl) azelate
	Di(2-ethylhexyl) azelate
	DOZ
	Plastolein 9058
	Plastolein 9058DOZ
	Staflex DOX
	Truflex DOX
	Bis-(2-ethylhexyl)ester kyseliny azelaove
	Dioctyl azelate
	Nonanedioic acid, di-2-ethylhexyl ester
	Emery 2958
	Emolien 2986
	Nonanedioic acid, 1,9-bis(2-ethylhexyl) ester
	Sansocizer DOZ
Inchi:	InChI=1S/C25H48O4/c1-5-9-16-22(7-3)20-28-24(26)18-14-12-11-13-15-19-25(27)29-21-
InchiKey:	ZDWGXBPVPXVXMQ-UHFFFAOYSA-N
Formula:	C25H48O4
SMILES:	CCCCC(CC)COC(=O)CCCCCCCC(=O)OCC(CC)CCCC
Mol. weight [g/mol]:	412.65
CAS:	103-24-2

Physical Properties

Property code	Value	Unit	Source
gf	-313.10	kJ/mol	Joback Method
hf	-1059.49	kJ/mol	Joback Method
hfus	59.03	kJ/mol	Joback Method
hvap	88.78	kJ/mol	Joback Method
log10ws	-7.53		Crippen Method
logp	7.236		Crippen Method
mcvol	377.990	ml/mol	McGowan Method
pc	811.68	kPa	Joback Method
rinpol	2669.00		NIST Webbook
rinpol	2669.00		NIST Webbook
tb	923.10	K	Joback Method
tc	1132.09	K	Joback Method

tf	485.83	K	Joback Method
vc	1.472	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1281.95	J/mol×K	923.10	Joback Method
cpg	1369.65	J/mol×K	1097.26	Joback Method
cpg	1355.01	J/mol×K	1062.43	Joback Method
cpg	1338.96	J/mol×K	1027.60	Joback Method
cpg	1321.46	J/mol×K	992.76	Joback Method
cpg	1302.47	J/mol×K	957.93	Joback Method
cpg	1382.92	J/mol×K	1132.09	Joback Method
dvisc	0.0000210	Pa×s	923.10	Joback Method
dvisc	0.0000290	Pa×s	850.22	Joback Method
dvisc	0.0000426	Pa×s	777.34	Joback Method
dvisc	0.0000676	Pa×s	704.47	Joback Method
dvisc	0.0001196	Pa×s	631.59	Joback Method
dvisc	0.0002451	Pa×s	558.71	Joback Method
dvisc	0.0006234	Pa×s	485.83	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C103242&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method: https://en.wikipedia.org/wiki/Joback_method

Legend

cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions

hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

Latest version available from:
https://www.chemeo.com/cid/83-824-5/Nonanedioic-acid-bis-2-ethylhexyl-ester.pdf
Generated by Cheméo on 2024-04-26 21:45:51.747902064 +0000 UTC m=+16457200.668479385.
Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.