Methyl 2-ethylhexyl phthalate

Other names: 1,2-Benzenedicarboxylic acid, 2-ethylhexyl methyl ester
2-Ethylhexyl methyl phthalate
Inchi: InChI=1S/C17H24O4/c1-4-6-9-13(5-2)12-21-17(19)15-11-8-7-10-14(15)16(18)20-3/h7-8,
InchiKey: MQYNKBGLFNKJPL-UHFFFAOYSA-N
Formula: C17H24O4
SMILES: CCCCC(CC)COC(=O)c1ccccc1C(=O)OC
Mol. weight [g/mol]: 292.37
CAS: 56166-83-7

Physical Properties

Property code	Value	Unit	Source
gf	-275.24	kJ/mol	Joback Method
hf	-664.03	kJ/mol	Joback Method
hfus	35.49	kJ/mol	Joback Method
hvap	74.30	kJ/mol	Joback Method
log10ws	-4.65		Crippen Method
logp	3.846		Crippen Method
mcvol	241.510	ml/mol	McGowan Method
pc	1687.95	kPa	Joback Method
rinpol	2053.00		NIST Webbook
tb	772.16	K	Joback Method
tc	975.26	K	Joback Method
tf	449.61	K	Joback Method
vc	0.921	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	704.89	J/mol×K	772.16	Joback Method
cpg	720.52	J/mol×K	806.01	Joback Method
cpg	735.10	J/mol×K	839.86	Joback Method
cpg	748.65	J/mol×K	873.71	Joback Method
cpg	761.19	J/mol×K	907.56	Joback Method
cpg	772.73	J/mol×K	941.41	Joback Method

cpg	783.29	J/mol×K	975.26	Joback Method
dvisc	0.0009014	Pa×s	449.61	Joback Method
dvisc	0.0004783	Pa×s	503.37	Joback Method
dvisc	0.0002868	Pa×s	557.13	Joback Method
dvisc	0.0001882	Pa×s	610.88	Joback Method
dvisc	0.0001322	Pa×s	664.64	Joback Method
dvisc	0.0000979	Pa×s	718.40	Joback Method
dvisc	0.0000756	Pa×s	772.16	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C56166837&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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

Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.