DECANAMIDE

Other names:	capramide
	decanoic acid amide
	decylamide
	n-decanamide
Inchi:	InChI=1S/C10H21NO/c1-2-3-4-5-6-7-8-9-10(11)12/h2-9H2,1H3,(H2,11,12)
InchiKey:	TUTWLYPCGCUWQI-UHFFFAOYSA-N
Formula:	C10H21NO
SMILES:	CCCCCCCCCC(N)=O
Mol. weight [g/mol]:	171.28

Physical Properties

Property code	Value	Unit	Source
af	0.7272		Cheméo Relay (1.0)
gf	-29.15	kJ/mol	Joback Method
hf	-455.67	kJ/mol	Cheméo Relay (1.0)
hfus	15.10	kJ/mol	Heat Capacities and Enthalpies of Solid-Solid Transitions and Fusion of a Series of Eleven Primary Alkylamides by Differential Scanning Calorimetry
hvap	70.39	kJ/mol	Cheméo Relay (1.0)
ie	9.68	eV	Cheméo Relay (1.0)
log10ws	-3.56		Cheméo Relay (1.0)
logp	2.612		Crippen Method
mcvol	163.310	ml/mol	McGowan Method
pc	2361.07	kPa	Joback Method
tb	529.12	K	Cheméo Relay (1.0)
tc	723.32	K	Cheméo Relay (1.0)
tf	311.32	K	Cheméo Relay (1.0)
vc	0.631	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	406.56	J/mol×K	554.60	Joback Method
cpg	421.01	J/mol×K	585.11	Joback Method
cpg	434.81	J/mol×K	615.62	Joback Method
cpg	447.97	J/mol×K	646.13	Joback Method
cpg	460.51	J/mol×K	676.64	Joback Method
cpg	472.45	J/mol×K	707.15	Joback Method
cpg	483.80	J/mol×K	737.66	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
Heat Capacities and Enthalpies of Solid-Solid Transitions and Fusion of a Series of Eleven Primary Alkylamides by Differential Scanning Calorimetry:	https://www.doi.org/10.1021/je700662a
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2319291&Units=SI
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

af:	Acentric Factor
cpg:	Ideal gas heat capacity
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
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume