Cyclohexanecarboxamide, N,N-didecyl-

Inchi: InChI=1S/C27H53NO/c1-3-5-7-9-11-13-15-20-24-28(27(29)26-22-18-17-19-23-26)25-21-
InchiKey: FINJVAYPYJWSHY-UHFFFAOYSA-N
Formula: C27H53NO
SMILES: CCCCCCCCCCN(CCCCCCCCCC)C(=O)C1CCCCC1
Mol. weight [g/mol]: 407.72

Physical Properties

Property code	Value	Unit	Source
gf	182.77	kJ/mol	Joback Method
hf	-591.34	kJ/mol	Joback Method
hfus	62.14	kJ/mol	Joback Method
hvap	84.91	kJ/mol	Joback Method
log10ws	-9.12		Crippen Method
logp	8.677		Crippen Method
mcvol	391.980	ml/mol	McGowan Method
pc	796.18	kPa	Joback Method
rinpol	2956.00		NIST Webbook
tb	903.02	K	Joback Method
tc	1105.56	K	Joback Method
tf	483.83	K	Joback Method
vc	1.504	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1361.34	J/mol×K	903.02	Joback Method
cpg	1384.64	J/mol×K	936.78	Joback Method
cpg	1406.48	J/mol×K	970.53	Joback Method
cpg	1426.93	J/mol×K	1004.29	Joback Method
cpg	1446.09	J/mol×K	1038.05	Joback Method
cpg	1464.02	J/mol×K	1071.80	Joback Method
cpg	1480.81	J/mol×K	1105.56	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U308528&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
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