

Hydrazine, trimethyl-

Other names:	(CH ₃) ₂ NNH(CH ₃) 1,1,2-Trimethylhydrazine N,N,N'-Trimethylhydrazine Trimethylhydrazine
Inchi:	InChI=1S/C3H10N2/c1-4-5(2)3/h4H,1-3H3
InchiKey:	NIIPNAJXERMYOG-UHFFFAOYSA-N
Formula:	C ₃ H ₁₀ N ₂
SMILES:	CNN(C)C
Mol. weight [g/mol]:	74.12
CAS:	1741-01-1

Physical Properties

Property code	Value	Unit	Source
gf	174.55	kJ/mol	Joback Method
hf	15.75	kJ/mol	Joback Method
hfus	11.65	kJ/mol	Joback Method
hvap	30.75	kJ/mol	Joback Method
ie	8.67	eV	NIST Webbook
ie	8.74	eV	NIST Webbook
ie	7.90 ± 0.10	eV	NIST Webbook
log10ws	0.17		Crippen Method
logp	-0.318		Crippen Method
mcvol	73.090	ml/mol	McGowan Method
pc	4474.22	kPa	Joback Method
rinpol	572.00		NIST Webbook
rinpol	572.00		NIST Webbook
ripol	684.00		NIST Webbook
ripol	684.00		NIST Webbook
ripol	684.00		NIST Webbook
sl	231.96	J/mol×K	NIST Webbook
tb	330.65	K	Joback Method
tc	499.68	K	Joback Method
tf	208.70	K	Joback Method
tt	201.24 ± 0.02	K	NIST Webbook
vc	0.257	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	152.26	J/mol×K	443.33	Joback Method
cpg	159.57	J/mol×K	471.51	Joback Method
cpg	119.69	J/mol×K	330.65	Joback Method
cpg	128.35	J/mol×K	358.82	Joback Method
cpg	136.66	J/mol×K	386.99	Joback Method
cpg	144.63	J/mol×K	415.16	Joback Method
cpg	166.56	J/mol×K	499.68	Joback Method
cpl	185.94	J/mol×K	292.15	NIST Webbook
hfust	9.49	kJ/mol	201.20	NIST Webbook
hfust	9.49	kJ/mol	201.20	NIST Webbook
hfust	9.48	kJ/mol	201.24	NIST Webbook
hvapt	33.40 ± 0.10	kJ/mol	292.00	NIST Webbook
hvapt	34.60	kJ/mol	272.00	NIST Webbook
hvapt	33.26	kJ/mol	292.15	NIST Webbook
sfust	47.13	J/mol×K	201.24	NIST Webbook
svapt	113.84	J/mol×K	292.15	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.58610e+01
Coeff. B	-3.58712e+03
Coeff. C	-4.20640e+01
Temperature range (K), min.	272.40
Temperature range (K), max.	384.56

Sources

Joback Method:

https://en.wikipedia.org/wiki/Joback_method

McGowan Method:

<http://link.springer.com/article/10.1007/BF02311772>

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C1741011&Units=SI>

**The Yaws Handbook of Vapor
Pressure:
Crippen Method:
Crippen Method:**

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>
<http://pubs.acs.org/doi/abs/10.1021/ci9903071>
https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
svapt:	Entropy of vaporization at a given temperature
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume

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