Propanenitrile, 2,2'-azobis[2-methyl-

Other names:

.alpha.,.alpha.'-azobis(isobutyronitrile)
.alpha.,.alpha.'-azodiisobutyric acid dinitrile
.alpha.,.alpha.'-azodiisobutyronitrile
2,2'-Azobis-(2-methylpropanenitrile)
2,2'-Azobis[2-methylpropionitrile]
2,2'-Azodi(isobutyronitrile)
2,2'-Dicyano-2,2'-azopropane
2,2'-azobis(2-cyanopropane)
2,2'-azobis(2-methylpropanenitrile)
2,2'-azobis(2-methylpropionitrile)
2,2'-azobis[isobutyronitrile]
2,2'-azodiisobutyronitril
2,2'-dimethyl-2,2'-azodipropionitrile
2,2'-dimethyl-2,2'-azodipropiononitrile
2,2-Azodiisobutyronitrile
2,2-azobis[2-methyl-]-propanenitrile (AZDH)
AIBN
AIVN
AZDH
Aceto AZIB
Alpha,alpha'-azo-di-iso-butyronitrile
Azobis[isobutyronitrile]
Azobisisobutylonitrile
Azodi(isobutyronitrile)
Azodiisobutyrodinitrile
ChKhZ 57
Genitron
Genitron AZDN
Genitron AZDN-FF
N,N'-azobis(isobutyronitrile)
N,N'-bis(2-cyano-2-propyl)diazene
NSC 1496
Pianofor An
Poly-zole AZDN
Porofor 57
Porofor N
Porophor N
Propanenitrile, 2,2'-(1,2-diazenediyl)bis(2-methyl-
Propionitrile, 2,2'-azobis[2-methyl-
V-60

Vazo
Vazo 64
azobisisobutyronitrile
«alpha»,«alpha»'-Azobis(isobutylonitrile)
«alpha»,«alpha»'-Azobis[isobutyronitrile]
«alpha»,«alpha»'-Azodi(isobutyronitrile)
«alpha»,«alpha»'-Azodiisobutyric acid dinitrile
«alpha»,«alpha»'-Azodisobutyric acid dinitrile
«alpha»,«alpha»-Azobisisobutyronitrile

Inchi: InChI=1S/C8H12N4/c1-7(2,5-9)11-12-8(3,4)6-10/h1-4H3
InchiKey: OZAIFHULBGXAKX-UHFFFAOYSA-N
Formula: C8H12N4
SMILES: CC(C)(C#N)N=NC(C)(C)C#N
Mol. weight [g/mol]: 164.21
CAS: 78-67-1

Physical Properties

Property code	Value	Unit	Source
chs	-5109.10 ± 1.80	kJ/mol	NIST Webbook
chs	-5240.50	kJ/mol	NIST Webbook
chs	-5091.70	kJ/mol	NIST Webbook
hf	151.03	kJ/mol	Joback Method
hfs	228.60	kJ/mol	NIST Webbook
hfs	246.00 ± 1.80	kJ/mol	NIST Webbook
hvap	58.44	kJ/mol	Joback Method
log10ws	-2.39		Crippen Method
logp	2.043		Crippen Method
mcvol	142.000	ml/mol	McGowan Method
pc	1957.87	kPa	Joback Method
tb	729.34	K	Joback Method
tc	975.18	K	Joback Method
tf	378.00	K	NIST Webbook
tt	351.15	K	Kinetic analysis of solids of the quasi-autocatalytic decomposition type: SADT determination of low-temperature polymorph of AIBN

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	254.52	J/mol×K	298.15	Thermal decomposition of AIBN Part A: Decomposition in real scale packages and SADT determination
cps	237.55	J/mol×K	298.00	NIST Webbook
cps	238.10	J/mol×K	298.12	NIST Webbook
hsubt	76.60 ± 4.20	kJ/mol	288.00	NIST Webbook

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Thermal decomposition of AIBN Part A: Decomposition in real scale packages and SADT determination:	https://www.doi.org/10.1016/j.tca.2015.06.013
Solubility in Different Solvents, Crystal Polymorph and Morphology, and Crippen Method:	https://www.doi.org/10.1021/acs.jced.7b00538
Optimization of Crystallization Process of AIBN:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C78671&Units=SI
Kinetic analysis of solids of the quasi-autocatalytic decomposition type: SADT determination of	https://www.doi.org/10.1016/j.tca.2018.05.015
Solubility of N-tert-Butylbenzothiazole-2-sulfonamide in Several Pure and Binary Solvents:	https://www.doi.org/10.1021/acs.jced.8b00954
low-temperature polymorph of AIBN:	

Legend

chs:	Standard solid enthalpy of combustion
cps:	Solid phase heat capacity
hf:	Enthalpy of formation at standard conditions
hfs:	Solid phase enthalpy of formation at standard conditions
hsubt:	Enthalpy of sublimation at a given temperature
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature