graphite

Inchi: InChI=1S/C
InchiKey: OKTJSMMVPCPJKN-UHFFFAOYSA-N
Formula: C
SMILES: [C]
Mol. weight [g/mol]: 12.01
CAS: 12751-41-6

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
rhos	1804.00	kg/m3	298.00	A new numerical method and modified apparatus for the simultaneous evaluation of thermo-physical properties above 1500 K: A case study on isostatically pressed graphite

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	2.91297e+01
Coeff. B	-9.60247e+04
Coeff. C	7.45000e+00
Temperature range (K), min.	2839.00
Temperature range (K), max.	3908.00

Sources

Thermodynamics of tetraphenylantimony benzoate Ph4SbOC(O)Ph:	https://www.doi.org/10.1016/j.jct.2018.11.011
Experimental and computational thermochemistry of 1-phenylpyrrole and 1-(4-methylphenyl)pyrrole:	https://www.doi.org/10.1016/j.jct.2010.01.009
Synthesis, crystal structure and thermochemistry of nickel hydrogen pyridine-2,6-dicarboxylate:	https://www.doi.org/10.1016/j.tca.2013.03.007
Standard molar enthalpies of formation of copper(II) beta-diketonates and monothio-beta-diketonates:	https://www.doi.org/10.1016/j.jct.2005.08.017
Thermochemical Study of the Methoxy- and Dimethoxyphenol Isomers:	https://www.doi.org/10.1021/je025641j
Experimental and computational thermochemical study of oxindole:	https://www.doi.org/10.1016/j.jct.2010.04.006
Synthesis, Characterization, and Thermodynamic Study of Barium Benzoate Ba(C7H5O2)2(s):	https://www.doi.org/10.1021/je800876t
Standard molar enthalpies of formation of three methyl-pyrazole derivatives:	https://www.doi.org/10.1016/j.jct.2011.10.007
Crystal structure and thermochemical properties of a novel coordination compound manganese D-gluconate tetrahydrate:	https://www.doi.org/10.1016/j.jct.2014.03.009
Experimental and computational thermochemical studies of benzoxazole and two chlorobenzoxazole derivatives:	https://www.doi.org/10.1016/j.jct.2012.08.028
Low-Temperature Heat Capacities and Standard Molar Enthalpy of Formation of Dichloro Bis(2-aminopyridine) Zinc (II), ZnCl2(C5H6N2)2(s):	https://www.doi.org/10.1007/s10765-010-0887-5
Standard molar enthalpies of formation of nickel(II) 1,2-diketonates and monothio-1,2-diketonates:	https://www.doi.org/10.1016/j.jct.2006.08.004
Low temperature heat capacities and standard molar enthalpy of formation of sodium benzoate C6H5COONa (s):	https://www.doi.org/10.1016/j.tca.2008.12.029
Molecular energetics of pyrrolecarbonitriles and derivatives: A combined calorimetric and computational study:	https://www.doi.org/10.1016/j.jct.2011.12.019
THERMOCHEMISTRY OF CYCLIC ACETONE PEROXIDES:	https://www.doi.org/10.1016/j.tca.2014.03.046
Experimental and computational thermochemical study of two fluorobenzazoles: 5-fluoro-2-methylbenzoxazole and 5-fluoro-2-methylbenzothiazole:	https://www.doi.org/10.1016/j.jct.2018.01.022
Standard molar enthalpies of formation of two crystalline [N-(diethylaminothiocarbonyl)benzamidinato]nickel(II) complexes:	https://www.doi.org/10.1016/j.jct.2004.04.009
When theory and experiment hold hands: The thermochemistry of gamma-pyrone derivatives:	https://www.doi.org/10.1016/j.jct.2011.02.021
Low-Temperature Heat Capacities and Standard Molar Enthalpy of Formation of Potassium Benzoate C7H5O2K(s):	https://www.doi.org/10.1007/s10765-009-0568-4
Standard molar enthalpies of formation of 1- and 2-cyanonaphthalene:	https://www.doi.org/10.1016/j.jct.2011.03.013
Energetic and structural properties of 4-nitro-2,1,3-benzothiadiazole:	https://www.doi.org/10.1016/j.jct.2012.01.018
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Standard molar enthalpies of formation in the crystalline phase of 7-hydroxy-4-methylcoumarin, 7-ethoxy-4-methylcoumarin, and [illegible]methoxy-4-methylcoumarin:	https://www.doi.org/10.1016/j.jct.2011.04.013
Experimental redetermination of the gas-phase enthalpy of formation of [illegible]carboxylate:	https://www.doi.org/10.1016/j.jct.2012.09.007
Enthalpy of formation of zinc acetate dihydrate:	https://www.doi.org/10.1016/j.jct.2011.02.004
Standard enthalpy, entropy and Gibbs free energy of formation of "A" type carbonate phosphocalcium hydroxyapatites:	https://www.doi.org/10.1016/j.jct.2016.10.035
Crystal structure, lattice potential energy, and thermochemical properties of a novel compound barium D-gluconate tetrahydrate:	https://www.doi.org/10.1016/j.jct.2013.10.005
Thermochemistry on crystalline compounds bis-(n-dodecylammonium) tetrachlorometallates (n-C12H25NH3)2MCl4(s) (M = Cu and Cd):	https://www.doi.org/10.1016/j.jct.2013.07.001
Fluorene: An extended experimental thermodynamic study:	https://www.doi.org/10.1016/j.jct.2011.09.006
Synthesis, structure, and thermodynamics of a lanthanide coordination compound incorporating 5-nitroisophthalic acid:	https://www.doi.org/10.1016/j.jct.2012.06.029
Thermodynamic study on complex of neodymium with glycine:	https://www.doi.org/10.1016/j.jct.2014.11.012
A new numerical method and modified apparatus for the simultaneous evaluation of thermo-physical properties above 1500 K: A case study on isostatically pressed graphite:	https://www.doi.org/10.1016/j.tca.2017.03.004
Energetics of 1-(aminophenyl)pyrroles: A joint calorimetric and computational study:	https://www.doi.org/10.1016/j.jct.2011.04.022
Synthesis, Structural Characterization and Thermochemistry of Copper Pyridine-2,6-dicarboxylate:	https://www.doi.org/10.1016/j.tca.2012.12.024
Thermochemical Analysis on Rare Earth Complex of Gadolinium with Salicylic acid and 8-hydroxyquinoline:	https://www.doi.org/10.1016/j.tca.2012.08.027
Enthalpy of Formation of Ln2O2CO3 II (Ln = La, Nd, Eu) and Thermodynamics of Decomposition Equilibria:	https://www.doi.org/10.1016/j.tca.2012.09.036
Low-Temperature Heat Capacities and Standard Molar Enthalpy of Formation of Potassium Hydrogen Phthalate C8H5KO4(s):	https://www.doi.org/10.1021/je900759f
Low-temperature Heat Capacity and the Standard Molar Enthalpy of Formation of Compound Chromium(III) Tri(2-Pyrazinecarboxylate):	https://www.doi.org/10.1016/j.tca.2012.05.023
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C12751416&Units=SI
Chemeo Relay (1.0, beta):	
Standard molar enthalpies of formation of 3'- and 4'-nitroacetophenones:	https://www.doi.org/10.1016/j.jct.2011.01.006
Enthalpies of combustion, vapour pressures, and enthalpies of sublimation of the 1,5- and 1,8-diaminonaphthalenes:	https://www.doi.org/10.1016/j.jct.2009.09.009
Thermodynamics of a model biological reaction: A comprehensive combined experimental and theoretical study:	https://www.doi.org/10.1016/j.fluid.2016.01.035

Thermochemical study of some dichloroacetophenone isomers:	https://www.doi.org/10.1016/j.jct.2010.09.005
Thermochemical studies of three bis(O-alkyl-N-benzoylthiocarbamato)nickel(II) complexes:	https://www.doi.org/10.1016/j.jct.2004.04.001
Enthalpies of formation of europium alkoxides: What lessons can be drawn from them:	https://www.doi.org/10.1016/j.jct.2014.04.009
Experimental and computational thermochemistry of 6,7-dihydro-4(5H)-benzofuranone:	https://www.doi.org/10.1016/j.jct.2012.07.008
Synthesis and energetics of Na, K, Rb and Cs salts by reaction with 1,2-ethanediol and 1,4-butanediol:	https://www.doi.org/10.1016/j.jct.2017.07.025
Low-Temperature Heat Capacities and Standard Molar Enthalpy of Formation of Ethylenediammonium Tetrachlorocobaltate(II) Chloride [(H3NCH2CH2NH3)2CoCl4]Cl2(s):	https://www.doi.org/10.1021/je901051z
Determination of the energies of combustion and enthalpies of formation of [(H3NCH2CH2NH3)2CoCl4]Cl2(s) by rotating bomb combustion calorimetry:	https://www.doi.org/10.1016/j.jct.2009.10.003
Experimental and computational study on the energetics of 5H-dibenzo[a,d]cycloheptene (dibenzosuberane):	https://www.doi.org/10.1016/j.jct.2010.10.009
Crystal structure and thermochemical properties of a novel coordination compound sodium pyruvate monohydrate:	https://www.doi.org/10.1016/j.jct.2014.06.029
Experimental study on the thermochemistry of some amino derivatives of uracil:	https://www.doi.org/10.1016/j.jct.2011.06.003
Thermodynamic study of 1,2,3-triphenylbenzene and 1,3,5-triphenylbenzene:	https://www.doi.org/10.1016/j.jct.2009.07.022
Standard enthalpy of formation of copper(II) pivalate:	https://www.doi.org/10.1016/j.jct.2018.11.016
Low-temperature heat capacities and standard molar enthalpy of formation of the solid-state coordination compound trans-Cu(Ala)2(s) (Ala = l--alanine):	https://www.doi.org/10.1016/j.tca.2008.02.024

Legend

pvap: Vapor pressure

rhos: Solid Density