

carbon

Other names: activated carbon
Inchi: InChI=1S/C
InchiKey: OKTJSMMVPCPJKN-UHFFFAOYSA-N
Formula: C
SMILES: [C]
Mol. weight [g/mol]: 12.01
CAS: 7440-44-0

Physical Properties

Property code	Value	Unit	Source
ea	1.20 ± 1.00	eV	NIST Webbook
ea	1.26 ± 0.00	eV	NIST Webbook
ea	1.26 ± 0.00	eV	NIST Webbook
hf	716.68 ± 0.45	kJ/mol	NIST Webbook
ie	11.26	eV	NIST Webbook
ie	11.20 ± 0.50	eV	NIST Webbook
ie	11.20 ± 0.50	eV	NIST Webbook
ie	10.90 ± 0.40	eV	NIST Webbook
ie	11.26	eV	NIST Webbook
ie	10.90 ± 0.40	eV	NIST Webbook
ie	10.50 ± 1.00	eV	NIST Webbook
ie	11.26	eV	NIST Webbook
ie	11.30 ± 0.20	eV	NIST Webbook
ie	11.26	eV	NIST Webbook
ie	12.40 ± 1.00	eV	NIST Webbook
ie	11.40 ± 1.50	eV	NIST Webbook
pc	796719.00	kPa	NIST Webbook
sgb	158.10 ± 0.00	J/mol×K	NIST Webbook
ss	5.83	J/mol×K	NIST Webbook
ss	6.20	J/mol×K	NIST Webbook
tb	4100.00 ± 100.00	K	NIST Webbook
tc	7020.50	K	NIST Webbook
vc	0.027	m ³ /kmol	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	10.68	J/mol×K	350.00	NIST Webbook
cps	9.25	J/mol×K	298.15	NIST Webbook
cps	8.60	J/mol×K	298.15	NIST Webbook

Sources

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440440&Units=SI>

KDB:

<https://www.therc.org/research/kdb/hcprop/showprop.php?cmpid=1969>

Legend

cps:	Solid phase heat capacity
ea:	Electron affinity
hf:	Enthalpy of formation at standard conditions
ie:	Ionization energy
pc:	Critical Pressure
sgb:	Molar entropy at standard conditions (1 bar)
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
vc:	Critical Volume

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