caesium

Other names: CESIUM
CESIUM-133
Inchi: InChI=1S/Cs
InchiKey: TVFDJXOCXUVLDH-UHFFFAOYSA-N
Formula: Cs
SMILES: [Cs]
Mol. weight [g/mol]: 132.91
CAS: 7440-46-2

Physical Properties

Property code	Value	Unit	Source
ea	0.47 ± 0.00	eV	NIST Webbook
ea	0.47 ± 0.00	eV	NIST Webbook
ea	0.47 ± 0.00	eV	NIST Webbook
hf	76.50 ± 1.00	kJ/mol	NIST Webbook
ie	3.89 ± 0.00	eV	NIST Webbook
ie	3.89	eV	NIST Webbook
ie	3.89 ± 0.00	eV	NIST Webbook
ie	3.90	eV	NIST Webbook
ie	3.89	eV	NIST Webbook
ie	3.89	eV	NIST Webbook
sgb	175.60 ± 0.00	J/mol×K	NIST Webbook
ss	85.23 ± 0.40	J/mol×K	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.33552e+01
Coeff. B	-8.09533e+03
Coeff. C	-1.75800e+01
Temperature range (K), min.	295.00
Temperature range (K), max.	944.15

Sources

Phase equilibria of the systems of CsCl + ErCl3 + H2O and CsCl + ErCl3 + HCl (10.7%, 14.4%) + H2O at T = 298.15 K and the standard molar enthalpies of formation of solid phase compounds: Cs4[(UO2)4(WO5)(W2O8)O2] and Cs3[(UO2)7(WO5)3O3].	https://www.doi.org/10.1016/j.jct.2013.09.016
An experimental calorimetric and DFT study of the thermodynamic properties of Cs3Na(MoO4)2: Determination of the standard enthalpy of formation and standard entropy at 298.15 K	https://www.doi.org/10.1016/j.jct.2019.07.015
KDB:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1950
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Thermodynamic study of Cs3Na(MoO4)2: Determination of the standard enthalpy of formation and standard entropy at 298.15 K	https://www.doi.org/10.1016/j.jct.2018.01.016
A calorimetric and thermodynamic investigation of cesium uranyl tungstate Cs3[(UO2)4(WO4)4(WO5)2].	https://www.doi.org/10.1016/j.jct.2019.05.012
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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440462&Units=SI
A calorimetric investigation of A2[(UO2)2(WO5)O] compounds with A = K, Rb and Cs and calculated phase relations in the K2WO4-UO3-H2O and K2MoO4-K2WO4-UO3-H2O systems:	https://www.doi.org/10.1016/j.jct.2017.03.039

Legend

ea:	Electron affinity
hf:	Enthalpy of formation at standard conditions
ie:	Ionization energy
pvap:	Vapor pressure
sgb:	Molar entropy at standard conditions (1 bar)
ss:	Solid phase molar entropy at standard conditions