

Cesium fluoride

Other names:	cesium fluoride (CsF) cesium monofluoride
Inchi:	InChI=1S/Cs.FH/h;1H/q+1;/p-1
InchiKey:	XJHCXCQVJFPJIK-UHFFFAOYSA-M
Formula:	Cs2F2
SMILES:	[Cs+].[F-]
Mol. weight [g/mol]:	303.81
CAS:	12285-54-0

Physical Properties

Property code	Value	Unit	Source
hfus	22.10	kJ/mol	A comprehensive study of the heat capacity of CsF from T = 5 K to T = 1400 K
tf	972.00	K	Thermodynamic determination and assessment of the CsF-ThF4 system

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.53539e+01
Coeff. B	-1.51489e+04
Coeff. C	-1.13050e+02
Temperature range (K), min.	985.15
Temperature range (K), max.	1524.15

Sources

Density of Methanolic Alkali Halide Salt Solutions by Experiment and Molecular Simulation: <https://www.doi.org/10.1021/je5009944>

Cheméo Relay (1.0, beta):

Thermodynamic investigation of $\text{RbF} + \text{Rb}_2\text{SO}_4 + \text{H}_2\text{O}$ and $\text{CsF} + \text{Cs}_2\text{SO}_4 + \text{H}_2\text{O}$ ternary systems by potentiometric measurements <https://www.doi.org/10.1016/j.fluid.2016.11.006>
Thermodynamic studies on CsF/RbF in H_2O ternary systems by potentiometric measurements <https://www.doi.org/10.1016/j.jct.2014.05.003>
Thermodynamic investigation of the $\text{RbF}-\text{H}_2\text{O}$ system by potentiometric measurements <https://www.doi.org/10.1021/acs.jced.8b00383>
Thermodynamic Properties of Mixed Electrolyte Systems at 298.2 K: $\text{CsF} + \text{CsBr} + \text{H}_2\text{O}$ and $\text{CsF} + \text{CsNO}_3 + \text{H}_2\text{O}$: NIST Webbook <http://webbook.nist.gov/cgi/cbook.cgi?ID=C12285540&Units=SI>

Thermodynamic studies of $(\text{RbF} + \text{RbCl} + \text{H}_2\text{O})$ and $(\text{CsF} + \text{CsCl} + \text{H}_2\text{O})$ ternary systems by potentiometric measurements <https://www.doi.org/10.1016/j.jct.2016.08.014>
The Yaws Handbook of Vapor Pressure <https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>
A comprehensive study of the heat capacity of CsF from $T = 5 \text{ K}$ to $T = 1000 \text{ K}$ <https://www.doi.org/10.1016/j.jct.2012.08.003>
Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions <https://www.doi.org/10.1021/je500420g>
Thermodynamic differentiation and assessment of the $\text{CsF}-\text{ThF}_4$ system: Activity Coefficients of RbF or CsF in the Ethene Glycol + Water System by Potentiometric Measurements at 298.15 K: <https://www.doi.org/10.1016/j.jct.2017.05.008>
<https://www.doi.org/10.1021/je200178b>

Legend

hfus: Enthalpy of fusion at standard conditions
vpap: Vapor pressure
tf: Normal melting (fusion) point

Latest version available from:

<https://www.chemeo.com/cid/12-259-1/Cesium-fluoride.pdf>

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