

germanium diselenide

Other names:	germanium selenide (Ge0.33Se0.67) germanium selenide (GeSe2)
Inchi:	InChI=1S/GeSe2/c2-1-3
InchiKey:	WYDSCDJEAVCHQJ-UHFFFAOYSA-N
Formula:	GeSe2
SMILES:	[Se]=[Ge]=[Se]
Mol. weight [g/mol]:	230.56
CAS:	12065-11-1

Physical Properties

Property code	Value	Unit	Source
ie	9.50	eV	NIST Webbook
log10ws	7.15		Crippen Method
logp	-1.142		Crippen Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	2.92	J/molxK	10.22	Heat capacity of vitreous and crystalline GeSe2 from 2 to 25K by relaxation calorimetry
cps	2.93	J/molxK	10.23	Heat capacity of vitreous and crystalline GeSe2 from 2 to 25K by relaxation calorimetry
cps	2.93	J/molxK	10.23	Heat capacity of vitreous and crystalline GeSe2 from 2 to 25K by relaxation calorimetry

cps	3.25	J/mol×K	10.78	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	3.26	J/mol×K	10.79	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	3.26	J/mol×K	10.80	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	3.61	J/mol×K	11.38	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	3.61	J/mol×K	11.39	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	3.62	J/mol×K	11.40	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.00	J/mol×K	12.01	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.01	J/mol×K	12.02	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.01	J/mol×K	12.03	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.42	J/mol×K	12.67	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry

cps	4.43	J/mol×K	12.68	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.43	J/mol×K	12.69	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.88	J/mol×K	13.38	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.89	J/mol×K	13.39	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	4.89	J/mol×K	13.39	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	5.38	J/mol×K	14.12	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	5.39	J/mol×K	14.13	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	5.39	J/mol×K	14.13	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	5.92	J/mol×K	14.90	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	5.93	J/mol×K	14.91	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry

cps	5.92	J/mol×K	14.91	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	6.49	J/mol×K	15.72	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	6.50	J/mol×K	15.73	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	6.50	J/mol×K	15.73	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	7.11	J/mol×K	16.58	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	7.11	J/mol×K	16.59	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	7.12	J/mol×K	16.59	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	7.77	J/mol×K	17.50	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	7.77	J/mol×K	17.50	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	7.77	J/mol×K	17.50	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry

cps	8.48	J/mol×K	18.45	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	8.48	J/mol×K	18.46	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	8.48	J/mol×K	18.47	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	9.26	J/mol×K	19.49	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	9.25	J/mol×K	19.49	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	9.24	J/mol×K	19.49	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	10.07	J/mol×K	20.56	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	10.05	J/mol×K	20.56	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	10.06	J/mol×K	20.57	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	10.87	J/mol×K	21.63	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry

cps	10.92	J/mol×K	21.69	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	10.91	J/mol×K	21.71	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	11.72	J/mol×K	22.84	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	11.83	J/mol×K	22.90	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	11.83	J/mol×K	22.90	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	12.85	J/mol×K	24.09	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	12.80	J/mol×K	24.17	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	12.79	J/mol×K	24.17	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	13.87	J/mol×K	25.42	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry
cps	13.70	J/mol×K	25.49	Heat capacity of vitreous and crystalline GeSe ₂ from 2 to 25K by relaxation calorimetry

Sources

Heat capacity of vitreous and crystalline GeSe₂ from 2 to 25K by Phase Equilibria in the GeSe₂-PbTe system:
NIST Webbook:

<https://www.doi.org/10.1016/j.tca.2006.02.026>

<https://www.doi.org/10.1016/j.tca.2007.04.001>

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C12065111&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cps: Solid phase heat capacity

ie: Ionization energy

log10ws: Log10 of Water solubility in mol/l

logp: Octanol/Water partition coefficient

Latest version available from:

<https://www.chemeo.com/cid/40-213-0/germanium-diselenide.pdf>

Generated by Cheméo on 2025-12-06 01:46:53.387032964 +0000 UTC m=+4733810.917073628.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.