

熱力学定数

単位: J

<<< S rhombohedral [sl] >>>

分子量 32.066

相数: 4

===== 298.15 K のデータ =====

相: <cs>

 $\Delta_f H^\circ (298.15\text{K}) = 0.0000 \text{ kJ/mol}$ $\Delta_f G^\circ (298.15\text{K}) = 0.0000 \text{ kJ/mol}$ $S^\circ (298.15\text{K}) = 31.8000 \text{ J/K} \cdot \text{mol}$

出典: 1, 1

===== 熱容量・相転移データ =====

***** 相1: rhombohedral<c1>

温度範囲: 298.15 - 368K [tp]

a = 14.77 b = 24.06 c = 0.728 d = 0 e = 0

 $\Delta_{tr} H^\circ (368\text{K}) = 0.4020 \text{ kJ/mol}$

出典: 4

***** 相2: monoclinic<c2>

温度範囲: 368 - 388K [mp]

a = 13.93 b = 29.29 c = 0 d = 0 e = 0

 $\Delta_{tr} H^\circ (388\text{K}) = 1.7200 \text{ kJ/mol}$

出典: 4

***** 相3: <l1>

温度範囲: 388 - 423K [ltp]

a = -0.8 b = 84 c = 0 d = 0 e = 0

出典: 4

***** 相4: <l2>

温度範囲: 423 - 719K [bp]

a = -25.31 b = 57.53 c = 88.37 d = 0 e = 0

出典: 4

<<< S rhomb [slg] >>>

分子量 32.066

相数: 5

===== 298.15 K のデータ =====

相: <cs>

 $\Delta_f H^\circ (298.15\text{K}) = 0.0000 \text{ kJ/mol}$ $\Delta_f G^\circ (298.15\text{K}) = 0.0000 \text{ kJ/mol}$ $S^\circ (298.15\text{K}) = 31.8000 \text{ J/K} \cdot \text{mol}$

出典: 1, 1

===== 熱容量・相転移データ =====

***** 相1: rhomb<c1>

温度範囲: 298.15 - 368K [tp]
a = 14.77 b = 24.06 c = 0.728 d = 0 e = 0
 $\Delta \text{tr} H^\circ (368\text{K}) = 0.4020 \text{ kJ/mol}$

出典: 4

***** 相2: monoc<c2>

温度範囲: 368 - 388K [mp]
a = 13.93 b = 29.29 c = 0 d = 0 e = 0
 $\Delta \text{tr} H^\circ (388\text{K}) = 1.7200 \text{ kJ/mol}$

出典: 4

***** 相3: <l1>

温度範囲: 388 - 423K [ltp]
a = -0.8 b = 84 c = 0 d = 0 e = 0
出典: 4

***** 相4: <l2>

温度範囲: 423 - 882.41K
a = -25.31 b = 57.53 c = 88.37 d = 0 e = 0
 $\Delta \text{tr} H^\circ (882.41\text{K}) = 52.7180 \text{ kJ/mol}$

出典: 4

***** 相5: diatomic gas<g>

温度範囲: 882.41 - 3000K
a = 17.038 b = 2.08 c = -1.222 d = -0.266 e = 0
出典: 34

注: $C_p^\circ = a + (b \cdot T) \cdot 1\text{E-}3 + (c/T^{**2}) \cdot 1\text{E+}5 + (d \cdot T^{**2}) \cdot 1\text{E-}6 + (e/T^{**3}) \cdot 1\text{E+}8$

データの出典

詳細はマニュアルを参照

1. Wagman, D. D. et al; The NBS tables of chemical thermodynamic properties, selected values for inorganic and C1 and C2 organic substances in SI units; J. Phys. Chem. REf. Data Vol.2 Supplement No. 2, (1982).
4. Mills, K. C.; Thermodynamic Data for Inorganic Sulphides, Selenides and

Tellurides; 1974; Butterworths, London.

34. Gurvich, L. V., Veyts, I. V., Alcock, C. B., Thermodynamic Properties of

Individual Substances Fourth Ed. (See also 11);

Volume 1, O, H(D, T), F, Cl, Br, I, He, Ne, Ar, Kr, Xe, Rn, S, N, P and Their Compounds,

1989, Hemisphere New York,

Volume 2, C, Si, Ge, Sn, Pb and Their Compounds, 1991, Hemisphere New York.