Name and formula

Reference code: 00-029-0095

PDF index name: Aluminum Titanium Carbide

Empirical formula: $Al_2C_2Ti_4$
Chemical formula: $Al_2Ti_4C_2$

Crystallographic parameters

Crystal system: Hexagonal
Space group: P63/mmc
Space group number: 194

a (Å): 3.0400
b (Å): 3.0400
c (Å): 13.6000
Alpha (°): 90.0000
Beta (°): 90.0000
Gamma (°): 120.0000

Calculated density (g/cm^3): 4.11
Volume of cell (10^6 pm^3): 108.85
Z: 1.00

RIR: -

Subfiles and Quality

Subfiles: Inorganic
Alloy, metal or intermetalic
Quality: Calculated (C)

Comments

References

Primary reference: Smith, D., Yu, Penn State University, University Park, Pennsylvania, USA., *ICDD Grant-in-Aid* (1975)
Unit cell: Jeitschko, W. et al., *Monatsh. Chem.* **94**, 672, (1963)

Peak list

No.	h	k	l	d [A]	2Theta[deg]	I [%]
1	0	0	2	6.80000	13.009	39.0
2	1	0	0	2.63300	34.022	19.0
3	1	0	1	2.58500	34.674	6.0
4	1	0	3	2.27700	39.546	100.0
5	0	0	6	2.26700	39.728	18.0
6	1	0	4	2.08200	43.429	3.0
7	1	0	6	1.71770	53.288	14.0
8	1	1	0	1.52000	60.899	14.0
9	2	0	0	1.31640	71.628	2.0

10	1	0	9	1.31060	71.994	9.0
11	1	1	6	1.26240	75.206	11.0
12	2	0	6	1.13830	85.174	2.0
13	2	0	9	0.99260	101.799	2.0
14	2	1	3	0.97190	104.853	3.0
15	1	1	12	0.90860	115.944	2.0
16	2	1	9	0.83110	135.896	2.0

Stick Pattern