

Gd₃Mn₂C₆*hP22*(176) *P6₃/m – h³cb***Gd₃Mn₂C₆** [1]

Structural features: MnC₃ trigonal units and infinite chains of face-linked MnC₆ octahedra (linear -Mn-chains) are interconnected via C=C bonds to form a 3D-framework. C₂ pairs. See Fig. IV.55.

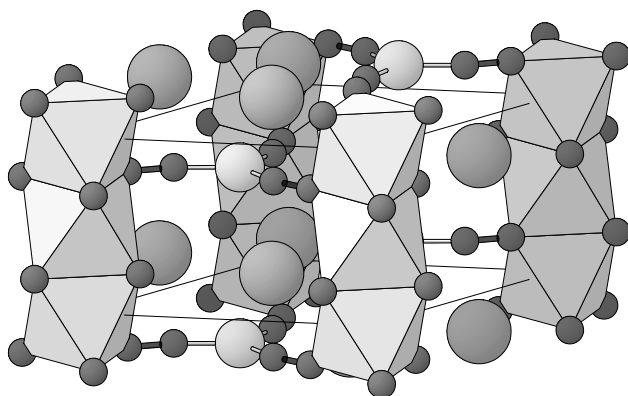
Kahnert G.E., Jeitschko W. (1993) [1]

C₆Gd₃Mn₂*a* = 0.815, *c* = 0.50493 nm, *c/a* = 0.620, *V* = 0.2905 nm³, *Z* = 2

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
C1	6 <i>h</i>	<i>m</i> ..	0.0364	0.2284	1/4		single atom C
C2	6 <i>h</i>	<i>m</i> ..	0.1348	0.4206	1/4		single atom C
Gd3	6 <i>h</i>	<i>m</i> ..	0.38183	0.31611	1/4		8-vertex polyhedron C ₈
Mn4	2 <i>c</i>	-6..	1/3	2/3	1/4		coplanar triangle C ₃
Mn5	2 <i>b</i>	-3..	0	0	0		octahedron C ₆

Experimental: single crystal, diffractometer, X-rays, *R* = 0.012

Remarks: Refinement of the site occupancies showed no significant deviation from unity. Preliminary data in [2].

Fig. IV.55. **Gd₃Mn₂C₆**

Arrangement of MnC₆ octahedra, MnC₃ triangles (Mn atoms light, C atoms dark) and Gd atoms (large).

References: [1] Kahnert G.E., Jeitschko W. (1993), *Z. Anorg. Allg. Chem.* 619, 93-97. [2] Kahnert G.E., Jeitschko W. (1990), *Acta Crystallogr. A* 46, C284-C285.