

Ba <sub>2</sub> Eu <sub>3</sub> Si <sub>7</sub>	<i>hP</i> 12	(189) <i>P</i> -62 <i>m</i> – g <sup>2</sup> fca
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**Ba<sub>2</sub>Eu<sub>3</sub>Si<sub>7</sub>** [1]

Structural features: Infinite complex Si chains parallel to [001] (superposed SiSi<sub>3</sub> triangles are interconnected via three additional Si on each side to form an infinite chain with 8-membered rings).

Häussermann C., Nesper R. (1995) [1]

Ba<sub>2</sub>Eu<sub>3</sub>Si<sub>7</sub>

*a* = 0.92742, *c* = 0.40912 nm, *c/a* = 0.441, *V* = 0.3047 nm<sup>3</sup>, *Z* = 1

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
Si1	3 <i>g</i>	<i>m2m</i>	0.4025	0	1/2		non-colinear Si <sub>2</sub>
Eu2	3 <i>g</i>	<i>m2m</i>	0.7433	0	1/2		7-capped pentagonal prism Si <sub>9</sub> Ba <sub>4</sub> Eu <sub>4</sub>
Si3	3 <i>f</i>	<i>m2m</i>	0.2598	0	0		tricapped trigonal prism Si <sub>3</sub> Eu <sub>4</sub> Ba <sub>2</sub>
Ba4	2 <i>c</i>	-6..	1/3	2/3	0		17-vertex polyhedron Si <sub>9</sub> Eu <sub>6</sub> Ba <sub>2</sub>
Si5	1 <i>a</i>	-62 <i>m</i>	0	0	0		tricapped trigonal prism Si <sub>3</sub> Eu <sub>6</sub>

Transformation from published data: -*x*, -*y*, -*z*

Experimental: single crystal, diffractometer, X-rays, R = 0.020, T = 293 K

References: [1] Häussermann C., Nesper R. (1995), Angew. Chem. Int. Ed. Engl. 34, 1462-1464 (Angew. Chem. 107, 1593-1594).