

substance: boron compounds with actinides
property: properties of boron-thorium compounds

On phase diagrams, preparation, structure and magnetic properties of actinoidmetal boron carbides [90R].

A new criterion for explaining the polar and reticular microhardness anisotropy of tetra- and hexaborides of actinides (and lanthanides) in [97D].

ThB₄

Preparation [77P, 75S, 75B], crystalline structure [77E, 75S], electronic structure [75S], magnetic properties [77B2], ESR spectra [73T]

Structural refinement in [96K].

lattice parameters

(in Å, tetragonal structure)

<i>a</i>	7.254(2)	<i>T</i> = 300 K	X-ray diffraction	96G
<i>c</i>	4.108(1)			
<i>a</i>	7.256			91S
<i>c</i>	4.111			

entropy

<i>S</i>	75.3(84) J K ⁻¹ mol ⁻¹	86B
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melting point

<i>T_m</i>	2500 °C	96G
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microhardness

<i>H_K</i> (prism)	1650...2130 kg mm ⁻²	<i>T</i> = 300 K, load 50 g	96G
<i>H_K</i> (dipyramid)	1710...2610 kg mm ⁻²	(range of anisotropy)	

ThB₆

Preparation [71E, 75S], crystalline structure [77E], magnetic properties [77B2], ESR spectra [73T]

X-ray diffraction (compared with LaB₆, YbB₆ and CaB₆) in [82B].

Structural refinement in [96K].

critical temperature of superconductivity

<i>T_c</i>	0.74 K	91F, 68M
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Thermal expansion coefficient: α [10⁻⁶ K⁻¹] = 4.1095 (1+7.37·10⁻⁶ *T* + 1.66 10⁻⁹ *T*²), *T* in K [73D].

entropy

<i>S</i>	83.7(84) J K ⁻¹ mol ⁻¹	86B
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microhardness

<i>H_K</i>	1670 kg mm ⁻²	<i>T</i> = 300 K	cube, average value, load 20 g	96G
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ThB₆₆

Semicond.?; preparation [75B], crystalline structure (YB₆₆-type) [75B, 81S, 76K]

ThB₇₆

Semicond.?; preparation [75S], crystalline structure [75S]

ThRh₄B₄

Space group: P4₂/nmc

Comparative critical field study of superconducting ternary borides [87L].

ThCrB₄

Preparation and structure in [96K].

ThCr₂B₆

Preparation and structure in [96K].

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