



>>Entry Name: Zirconium borides

CAS Registry Number: 12741-10-5

Molecular Formula: [BZr]

>>Variant: Zirconium boride (ZrB), 9Cl, 8Cl

Synonym(s): Zirconium monoboride

CAS Registry Number: 12045-28-2

Molecular Formula: BZr

Molecular Weight: 102.035

Accurate Mass: 100.914008

Percentage Composition: B 10.60%; Zr 89.40%

>>Variant: Zirconium boride (ZrB<sub>2</sub>), 9Cl, 8Cl

Synonym(s): Zirconium diboride

CAS Registry Number: 12045-64-6

Molecular Formula: B<sub>2</sub>Zr

Molecular Weight: 112.846

Accurate Mass: 111.923313

Percentage Composition: B 19.16%; Zr 80.84%

Source/Synthesis: Synth. from elements

Use/Importance: Employed in ceramics and as metal coatings

Melting Point: Mp 3050°

Other Data: Attacked by HCl (1:1), H<sub>2</sub>SO<sub>4</sub> (1:1) (→ H<sub>2</sub>, SO<sub>2</sub>, H<sub>2</sub>S), HNO<sub>3</sub> (1:1); slowly by H<sub>2</sub>O<sub>2</sub>, or acids containing H<sub>2</sub>O<sub>2</sub>. Attacked also by 5-20% aq. NaOH at 80°

Aldrich: 33634-3

>>Variant: Zirconium boride (ZrB<sub>12</sub>), 9Cl, 8Cl

Synonym(s): Zirconium dodecaboride

CAS Registry Number: 12046-91-2

Molecular Formula: B<sub>12</sub>Zr

Molecular Weight: 220.956

Accurate Mass: 222.016363

Percentage Composition: B 58.71%; Zr 41.29%

Source/Synthesis: Synth. from elements, or B + Zr oxide at 1450-1600°

Melting Point: Mp 2680°

Other Data: Stable at 1500°

Fluka: 96582

References:

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