



>>Entry Name: Zirconium carbides

CAS Registry Number: 51680-56-9

Molecular Formula: [CZr]

>>Variant: Zirconium carbide (Zr₂C), 11Cl

CAS Registry Number: 12179-95-2

Molecular Formula: CZr₂

Molecular Weight: 194.459

Accurate Mass: 191.809406

Percentage Composition: C 6.18%; Zr 93.82%

Source/Synthesis: Synth. by heating Zr and C

>>Variant: Zirconium carbide (ZrC), 11Cl

CAS Registry Number: 12070-14-3

Molecular Formula: CZr

Molecular Weight: 103.235

Accurate Mass: 101.904703

Percentage Composition: C 11.63%; Zr 88.37%

Source/Synthesis: Manuf. by reducing ZrSiO₄ with C in an electric furnace. Synth. by condensing Zr vapour on graphite at 1700° or heating ZrO₂ and graphite to 2200° at 500 atm.

Use/Importance: Used chiefly in abrasives and cutting tools

Aldrich: 33635-1

References:

Suzuki, H. *et al.*, *Bull. Tokyo Inst. Technol.*, 1963, **54**, 159, (*synth, ZrC*)

Samsonov, G.V. *et al.*, *Monatsh. Chem.*, 1971, **102**, 1667, (*synth, ZrC*)

Gert, L.M. *et al.*, *Izv. Akad. Nauk SSSR, Neorg. Mater.*, 1972, **8**, 381; *CA*, **76**, 118228c, (*synth, ZrC*)

Obata, N. *et al.*, *J. Nucl. Mater.*, 1976, **60**, 39, (*cryst struct, Zr₂C*)

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Andrievskii, R.A., *Poroshk. Metall. (Kiev)*, 1982, 37; *CA*, **96**, 221077q, (*rev, ZrC*)

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