



>>Entry Name: Zirconium nitride (ZrN), 11Cl

CAS Registry Number: 25658-42-8

Extra CAS Registry Numbers(s): 119173-61-4

ZrN

Molecular Formula: NZr

Molecular Weight: 105.231

Accurate Mass: 103.907777

Percentage Composition: N 13.31%; Zr 86.69%

Source/Synthesis: Manuf. by heating Zr powder to 800-1000° in N₂ or NH₃. Synth. from ZrCl₄ and NH₃ (ZrN_{1.28} at 700° to ZrN_{1.03} at 1100°) or by igniting a pellet of Zr and NaN₃ in an N₂ atm. or by hot pressing ZrO₂ and AlN at 1400° *in vacuo*

Use/Importance: Used in cutting tools, ceramics and electrically conducting pastes

Aldrich: 39943-4

References:

Christensen, A.N., *Acta Chem. Scand., Ser. A*, 1975, **29**, 563, (*nd, cryst struct*)

Yajima, A. *et al.*, *Bull. Chem. Soc. Jpn.*, 1983, **56**, 2683, (*synth*)

Holt, J.B., *Mater. Sci. Res.*, 1984, **17**, 167; *Ind. Res. Dev.*, 1983, **25**, 88, (*synth*)

Japan. Pat., 1986, 61 97 112; *CA*, **105**, 99950f, (*manuf*)

Bayer, G. *et al.*, *Rev. Chim. Miner.*, 1986, **23**, 80, (*synth*)