



>>Entry Name: Titanium carbide (TiC), 11Cl

CAS Registry Number: 12070-08-5

Related CAS Registry Numbers(s): 56780-56-4

TiC

Molecular Formula: CTi

Molecular Weight: 59.891

Accurate Mass: 59.947947

Percentage Composition: C 20.05%; Ti 79.95%

struct. which is retained in non-stoichiometric phases. There is an order<< >>disorder transition at 760-790°. The surface electronic struct. and bonding has been studied by variable energy x-ray pe

Source/Synthesis: Synth. and manuf. involve reactions of Ti and C usually at high temps. e.g. Ti + C black at 1800-2500°

Use/Importance: Wide range of uses from abrasives and cutting tools to ceramics and anodes for Al refining

Melting Point: Mp 3137°

Aldrich: 30780-7

Fluka: 89480

References:

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

Kato, A. *et al.*, *Mem. Fac. Eng., Kyushu Univ.*, 1981, **41**, 319, (*synth, fine powder*)

Binder, F. *et al.*, *Radex Rundsch.*, 1981, 690, (*manuf*)

Moisy-Maurice, V. *et al.*, *Sci. Hard Mater., [Proc. Int. Conf.]*, 1981, 1981, 83, (*order/disorder transition*)

Bonfigliani, A. *et al.*, *Metall. Ital.*, 1983, **75**, 259, (*rev, use*)

Kiparisov, S.S. *et al.*, *Poroshk. Metall. (Kiev)*, 1983, 24; *CA*, **104**, 159784w, (*manuf*)

Inzenhofer, A., *Fachber. Metallbearb.*, 1984, **61**, 105, (*rev, use*)

Japan. Pat., 1984, 59 16 968; *CA*, **100**, 214501w, (*manuf*)

Didziulis, S.V. *et al.*, *Inorg. Chem.*, 1994, **33**, 1979, (*x-ray pe*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, TGG000