



>>Entry Name: Titanium oxide (TiO), 11Cl

CAS Registry Number: 12137-20-1

TiO

Molecular Formula: OTi

Molecular Weight: 63.879

Accurate Mass: 63.942862

Percentage Composition: O 25.05%; Ti 74.95%

sub-lattice. There is a monoclinic to cubic phase change at 980°

Source/Synthesis: Manuf. by heating TiO₂ and Ti *in vacuo* at temps. between 800 and 1900°

Use/Importance: Antireflection coating, used in electrochromic displays; used in anodes for the chlor-alkali industry

Physical Description: Black solid

Aldrich: 37917-4

Fluka: 89502

>>Variant: High-temp-form

Molecular Formula: OTi

Molecular Weight: 63.879

Accurate Mass: 63.942862

Source/Synthesis: Synth. from TiO₂ + Ti using a CO₂ laser to attain temps. >3000°

Physical Description: Black cryst.

References:

Hilti, E. *et al.*, *Naturwissenschaften*, 1968, **55**, 131, (*phase change*)

Ger. Pat., 1971, 2 140 352; *CA*, **78**, 138418j, (*manuf*)

Ger. Pat., 1973, 2 150 039; *CA*, **78**, 154334j, (*use*)

Alyamovskii, S.I. *et al.*, *Izv. Akad. Nauk SSSR, Neorg. Mater.*, 1979, **15**, 1484, (*rev, cryst struct*)

Japan. Pat., 1982, 57 136 603; *CA*, **98**, 39600u, (*use*)

Burdett, J.K. *et al.*, *J.A.C.S.*, 1984, **106**, 3101, (*cryst struct*)

Möhr, S. *et al.*, *Z. Anorg. Allg. Chem.*, 1994, **620**, 1175, (*synth, cryst struct, high temp form*)