

DURMAT[®] FTC

Fused Tungsten Carbide

General characteristics:

Fused Tungsten Carbide (FTC) is one of the hardest and most abrasion resistant materials used in the modern wear resistance and tool technology. FTC is the eutectic composition of WC and W₂C. The average carbon content of our FTC is 3.8 – 4.1 wt. % and the phases can be estimated to be approximately 78 – 80% W₂C and 20 – 22% WC.

Application:

Hard facing metallic surfaces exposed to extreme mechanical load. In this case FTC should be used as a fine or coarser powder, which is embedded in the metallic matrix or is precipitated into hard alloys. *Surface coating by thermal spraying or welding. Using powder metallurgical processes, it is possible to produce parts of nearly any shape, which can contain hard materials or diamonds together with a metal binder and FTC. *Reinforcing the hardness of diamond tools. FTC equalizes the matrices between the different harnesses of diamonds and binder in a diamond drilling, grinding and honing tools. Excellent for deep well drilling tools and rods, crusher jaws, mixers, concrete and stone saws, hot-pressed tools, screens & conveyors, extrusion housings, hard additives to diamond bits and saws.

Chemical composition (in wt-%):

C-total	C-free	O ₂ sieve range	O ₂ - sub sieve range	Fe	Co
3.8 – 4.1	0.1 max	0.05 max.	0.2 max.	0.3 max.*)	0.3 max.*)

Physical characteristics:

Hardness:	2360 HV _{0.1}
Structure:	mainly feather
Density:	16.0 – 17.0 g/cm ³
Melting point:	2860°C (5176°F)

Quality assurance:

The constant testing of our raw materials, production and pre-shipment procedures ensure the homogeneity of the compliance with the specifications of all powder grades that we deliver.

Sales Units:

PE-bottle: 5 kg **)

*) depends on grain size

**) others on request