

Title (en)  
Nitrogen-containing sintered hard alloy

Title (de)  
Stickstoffenthaltende hartgesinterte Legierung

Title (fr)  
Alliage dur fritté contenant de l'azote

Publication  
**EP 0687744 A2 19951220 (EN)**

Application  
**EP 95107670 A 19950518**

Priority  
• JP 10558494 A 19940519  
• JP 4929095 A 19950215

Abstract (en)  
A nitrogen-containing sintered hard alloy includes at least 75 percent by weight and not more than 95 percent by weight of a hard phase containing Ti, a group 6A metal and WC in a prescribed composition, and at least 5 percent by weight and not more than 25 percent by weight of a binder phase containing Ni, Co and unavoidable impurities, and contains at least 5 percent by weight and not more than 60 percent by weight of Ti in terms of a carbide or the like, and at least 30 percent by weight and not more than 70 percent by weight of a metal belonging to the group 6A of the periodic table in terms of a carbide, while the atomic ratio of nitrogen/(carbon + nitrogen) in the hard phase is at least 0.2 and less than 0.5, and the nitrogen-containing sintered hard alloy is provided with a soft layer containing a binder phase metal and WC in its outermost surface, and has a layer which is hardly provided with the hard phase containing WC in a portion immediately under the soft layer in a thickness of at least 3  $\mu$ m and not more than 30  $\mu$ m. According to this composition, it is possible to provide a nitrogen-containing sintered hard alloy which can be employed as a cutting tool having high reliability with no surface coating also in working under conditions bringing a strong thermal shock. <IMAGE>

IPC 1-7  
**C22C 29/02**; **C22C 29/04**; **C22C 29/08**; **C22C 29/16**

IPC 8 full level  
**B22F 7/02** (2006.01); **C22C 1/05** (2006.01); **C22C 29/02** (2006.01); **C22C 29/04** (2006.01)

CPC (source: EP KR)  
**B22F 3/101** (2013.01 - EP); **B22F 3/1028** (2013.01 - EP); **B22F 7/02** (2013.01 - EP); **C22C 1/051** (2013.01 - EP); **C22C 29/02** (2013.01 - EP); **C22C 29/04** (2013.01 - EP); **C22C 29/08** (2013.01 - KR); **B22F 2201/02** (2013.01 - EP); **B22F 2201/20** (2013.01 - EP); **B22F 2998/00** (2013.01 - EP)

Cited by  
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Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0687744 A2 19951220**; **EP 0687744 A3 19960821**; **EP 0687744 B1 19991103**; DE 69513086 D1 19991209; DE 69513086 T2 20000713; DE 69523342 D1 20011122; DE 69523342 T2 20020627; EP 0822265 A2 19980204; EP 0822265 A3 19980415; EP 0822265 B1 20011017; KR 0180522 B1 19990218; KR 950032671 A 19951222

DOCDB simple family (application)  
**EP 95107670 A 19950518**; DE 69513086 T 19950518; DE 69523342 T 19950518; EP 97115279 A 19950518; KR 19950012885 A 19950519