

Title (en)  
HYPEREUTECTIC ALUMINUM/SILICON ALLOY POWDER AND PRODUCTION THEREOF

Title (de)  
ÜBEREUTEKTISCHES ALUMINIUM-SILIKON-PULVER UND DESSEN HERSTELLUNG

Title (fr)  
POUDRE A BASE D'UN ALLIAGE ALUMINIUM/SILICIUM HYPEREUTECTIQUE ET PRODUCTION DE CETTE POUDRE

Publication  
**EP 0592665 B1 19960612 (EN)**

Application  
**EP 91918937 A 19911031**

Priority  

- JP 9101488 W 19911031
- JP 29501890 A 19901031
- JP 29501990 A 19901031
- JP 29509990 A 19901031

Abstract (en)  
[origin: EP0592665A1] A hypereutectic aluminum/silicon alloy powder wherein a primary crystal of silicon has a grain diameter of as minute as 10  $\mu$  m or less is produced by the atomization process which comprises preparing a melt of a hypereutectic aluminium/silicon alloy containing phosphorus and spraying the melt by means of air or an inactive gas to effect rapid cooling for solidification. The obtained alloy powder contains 12 to 50 wt% of silicon and 0.0005 to 0.1 wt% of phosphorus. This powder can provide a solidified powder with improved mechanical properties in a high yield without any limitation to the grain size. <IMAGE>

IPC 1-7  
**B22F 1/00**; **B22F 9/08**

IPC 8 full level  
**C22C 1/04** (2006.01)

CPC (source: EP)  
**C22C 1/0416** (2013.01)

Cited by  
US6136106A; US6030577A; US6086819A; GB2317900A; GB2317900B; WO9709459A1; WO9703775A1; EP0747494B1; WO9709458A1; WO9709457A1

Designated contracting state (EPC)  
DE FR GB IT SE

DOCDB simple family (publication)  
**EP 0592665 A1 19940420**; **EP 0592665 A4 19931119**; **EP 0592665 B1 19960612**; DE 69120299 D1 19960718; DE 69120299 T2 19970123; WO 9207676 A1 19920514

DOCDB simple family (application)  
**EP 91918937 A 19911031**; DE 69120299 T 19911031; JP 9101488 W 19911031