

Title (en)  
PARTICULATE FEEDSTOCK FOR METAL INJECTION MOLDING

Title (de)  
PULVERMISCHUNG ZUM SPRITZGIESSEN VON METALL

Title (fr)  
MATERIAU PARTICULAIRE D'ALIMENTATION POUR MOULAGE PAR INJECTION

Publication  
**EP 0666783 B1 20000412 (EN)**

Application  
**EP 93918800 A 19930906**

Priority  

- AU 9300454 W 19930906
- AU PL463692 A 19920911
- AU PL968093 A 19930629

Abstract (en)  
[origin: WO9406586A1] Particles of metal alloys and composites have been developed that are particularly suitable for use in producing thixotropic alloys and in the injection molding of such alloys. The particulate material comprises particles of metal alloy or composite, wherein a substantial proportion of the particles is shaped such that the ratio of the length of the largest dimension of a particle to the effective diameter of the particle is in the range of 1.0 to 4.0 and the substantial proportion of particles has a particle size wherein the largest dimension of the particles lies within the range of 0.5 to 5.0 mm. This allows convenient handling of the particles whilst also avoiding binding or clogging of the screw, in the case where a screw extruder is used.

IPC 1-7  
**B22D 23/00**; **C22B 9/16**; **B22D 17/00**

IPC 8 full level  
**B22D 17/00** (2006.01); **B22D 17/20** (2006.01); **B22F 1/05** (2022.01); **B22F 1/06** (2022.01); **B22F 3/02** (2006.01); **B22F 3/22** (2006.01); **C22B 9/16** (2006.01); **C22C 1/00** (2006.01)

CPC (source: EP US)  
**B22D 17/007** (2013.01 - EP); **B22F 1/05** (2022.01 - EP US); **B22F 1/06** (2022.01 - EP US); **B22F 3/225** (2013.01 - EP US); **C22B 9/16** (2013.01 - EP); **C22C 1/12** (2023.01 - EP); **B22F 2998/00** (2013.01 - EP)

Citation (examination)  

- DE 3639737 A1 19880601 - SIEMENS AG [DE]
- US 3881913 A 19750506 - BARANNIK IVAN ANDREEVICH, et al
- GB 2182063 A 19870507 - MITSUBISHI METAL CORP
- US 4460407 A 19840717 - KEITH EARL K [US]
- Look-up Table Mesh/Microns
- Design Engineering Feb. 1989, page 33
- Hoechst Data Sheet "Karbid und Metallurgische Produkte", Sept. 1978
- Brochure of Reade Manufacturing Company
- Brochure of Reynolds Metals Company
- Analysis of Eckart Granules of 12.12.2000
- PFEIFER H.: "Grundlagen der Fordertechnik" 1989
- MENGES G.: "Einführung in der Kunststoffverarbeitung" 1986
- "Granulierung der thermoplastischen Kunststoffen" VDI-Verlag GmbH 1974
- JOHANNABER F.: "Kunststoffmaschinenführer" 1992
- Brochure from Poudmet
- ERICKSON S.: Proceedings 44th Annual World Magnesium Conference, Tokyo, 1987
- "Thixomolding" Proceedings 47th Annual World Magnesium Conference, Cannes, France, 1990
- KURIHARA K. et al: Japanese language article, pages 255-260, April 1981 and English translation thereof
- GHOSH D. et al: Proceedings on the International Symposium on Advances in Production and Fabrication of Light Metals and Metal Matrix Composites, Alberta, August 23-27, 1992
- PASTERNAK D. et al: Proceedings of the Second International Conference of the Semi-Solid Processing of Alloys and Composites, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1993
- PASTERNAK D. et al: Proceedings of the Second International Conference of Semi-Solid Processing of Alloys and Composites, Massachusetts Institute of Technology, June 10-12, 1992

Cited by  
DE10317762B4

Designated contracting state (EPC)  
DE FR GB IT SE

DOCDB simple family (publication)  
**WO 9406586 A1 19940331**; BR 9307038 A 19990824; CA 2144434 A1 19940331; DE 69328374 D1 20000518; DE 69328374 T2 20000810; DE 69333841 D1 20050818; EP 0666783 A1 19950816; EP 0666783 A4 19970702; EP 0666783 B1 20000412; EP 0666783 B2 20060315; EP 0960673 A1 19991201; EP 0960673 B1 20050713; IL 106986 A0 19931228; IL 106986 A 19970814; JP 3497167 B2 20040216; JP H08501128 A 19960206; MX 9305588 A 19940531

DOCDB simple family (application)  
**AU 9300454 W 19930906**; BR 9307038 A 19930906; CA 2144434 A 19930906; DE 69328374 T 19930906; DE 69333841 T 19930906; EP 93918800 A 19930906; EP 99201696 A 19930906; IL 10698693 A 19930909; JP 50759894 A 19930906; MX 9305588 A 19930910