

Title (en)

Lubricant composition suitable for application on metal workpieces during hot-forming

Title (de)

Schmiermittelzusammensetzung für die Anwendung auf Werkstücken bei der Heissumformung von Metallen

Title (fr)

Composition lubrifiante convenant à l'application sur des pièces métalliques pour le formage à chaud

Publication

**EP 0743352 B1 19990728 (DE)**

Application

**EP 96107611 A 19960513**

Priority

CH 141695 A 19950516

Abstract (en)

[origin: EP0743352A1] Lubricating oil compsn. (I) consists of: (a1) 0-80 (wt.%) glass powder; (a2) 0-50 glass frit, where one of (a1) or (a2) is hot 0 wt.%; (b) 10-25 natural or synthetic graphite; (c) 5-20 alkali silicates of formula: Me<sub>2</sub>O<sub>n</sub>SiO<sub>2</sub> (where Me = Li, K or Na; and n = 1-4); (d) 1-6 water-soluble Na-polymetaphosphate; (e) 0-3 water-insoluble Na-polymetaphosphate; (f) 0.5-4 thickener; and (g) 0-1 borax.

IPC 1-7

**C10M 103/00**; **C10M 169/04**

IPC 8 full level

**B21C 23/32** (2006.01); **C10M 103/00** (2006.01); **C10M 113/02** (2006.01); **C10M 113/12** (2006.01); **C10M 113/14** (2006.01); **C10M 119/20** (2006.01); **C10M 125/02** (2006.01); **C10M 125/24** (2006.01); **C10M 125/26** (2006.01); **C10M 125/28** (2006.01); **C10M 145/10** (2006.01); **C10M 145/40** (2006.01); **C10M 169/04** (2006.01); **C10M 173/02** (2006.01); **B21B 45/02** (2006.01); **C10N 10/02** (2006.01); **C10N 20/00** (2006.01); **C10N 20/06** (2006.01); **C10N 40/24** (2006.01)

CPC (source: EP KR US)

**C10M 103/00** (2013.01 - EP US); **C10M 103/02** (2013.01 - EP US); **C10M 103/06** (2013.01 - EP US); **C10M 125/24** (2013.01 - EP US); **C10M 125/26** (2013.01 - EP US); **C10M 139/00** (2013.01 - KR); **C10M 145/14** (2013.01 - EP US); **C10M 145/40** (2013.01 - EP US); **C10M 169/044** (2013.01 - EP US); **C10M 2201/003** (2013.01 - EP US); **C10M 2201/02** (2013.01 - EP US); **C10M 2201/0403** (2013.01 - EP US); **C10M 2201/041** (2013.01 - EP US); **C10M 2201/0413** (2013.01 - EP US); **C10M 2201/042** (2013.01 - EP US); **C10M 2201/0423** (2013.01 - EP US); **C10M 2201/0433** (2013.01 - EP US); **C10M 2201/0603** (2013.01 - EP US); **C10M 2201/0613** (2013.01 - EP US); **C10M 2201/0623** (2013.01 - EP US); **C10M 2201/0653** (2013.01 - EP US); **C10M 2201/0663** (2013.01 - EP US); **C10M 2201/0803** (2013.01 - EP US); **C10M 2201/085** (2013.01 - EP US); **C10M 2201/0853** (2013.01 - EP US); **C10M 2201/0863** (2013.01 - EP US); **C10M 2201/087** (2013.01 - EP US); **C10M 2201/0873** (2013.01 - EP US); **C10M 2201/10** (2013.01 - EP US); **C10M 2201/1006** (2013.01 - EP US); **C10M 2201/102** (2013.01 - EP US); **C10M 2201/1023** (2013.01 - EP US); **C10M 2201/1033** (2013.01 - EP US); **C10M 2201/105** (2013.01 - EP US); **C10M 2201/1053** (2013.01 - EP US); **C10M 2201/12** (2013.01 - EP US); **C10M 2201/123** (2013.01 - EP US); **C10M 2209/084** (2013.01 - EP US); **C10M 2209/12** (2013.01 - EP US); **C10N 2040/24** (2013.01 - EP US); **C10N 2040/241** (2020.05 - EP US); **C10N 2040/242** (2020.05 - EP US); **C10N 2040/243** (2020.05 - EP US); **C10N 2040/244** (2020.05 - EP US); **C10N 2040/245** (2020.05 - EP US); **C10N 2040/246** (2020.05 - EP US); **C10N 2040/247** (2020.05 - EP US)

C-Set (source: EP US)

1. **C10M 2201/0613 + C10M 2201/0613**
2. **C10M 2201/0623 + C10M 2201/0623**
3. **C10M 2201/0653 + C10M 2201/0653**
4. **C10M 2201/0663 + C10M 2201/0663**
5. **C10M 2201/0603 + C10M 2201/0603**
6. **C10M 2201/0853 + C10M 2201/0853**
7. **C10M 2201/0863 + C10M 2201/0863**
8. **C10M 2201/0873 + C10M 2201/0873**
9. **C10M 2201/0803 + C10M 2201/0803**
10. **C10M 2201/1023 + C10M 2201/1023**
11. **C10M 2201/1033 + C10M 2201/1033**
12. **C10M 2201/1053 + C10M 2201/1053**
13. **C10M 2201/1006 + C10M 2201/1006**
14. **C10M 2201/123 + C10M 2201/123**

Designated contracting state (EPC)

AT BE CH DE ES FI FR GB IE IT LI LU NL PT SE

DOCDB simple family (publication)

**EP 0743352 A1 19961120**; **EP 0743352 B1 19990728**; AR 001910 A1 19971210; AT E182612 T1 19990815; BR 9602185 A 19980407; CA 2174825 A1 19961117; CN 1063479 C 20010321; CN 1143107 A 19970219; CZ 140596 A3 19961211; DE 59602520 D1 19990902; ES 2136916 T3 19991201; HU 219309 B 20010328; HU 9601314 D0 19960729; HU P9601314 A2 19970228; HU P9601314 A3 19980728; JP 2930003 B2 19990803; JP H08311479 A 19961126; KR 960041327 A 19961219; MX 9601821 A 19970731; NO 962019 D0 19960515; NO 962019 L 19961118; RO 116817 B1 20010629; RU 2153525 C2 20000727; SI 0743352 T1 19991031; SK 61996 A3 19970709; TR 199600394 A2 19961221; TW 324739 B 19980111; US 5691282 A 19971125; ZA 963198 B 19961025

DOCDB simple family (application)

**EP 96107611 A 19960513**; AR 33646996 A 19960510; AT 96107611 T 19960513; BR 9602185 A 19960508; CA 2174825 A 19960423; CN 96106237 A 19960516; CZ 140596 A 19960515; DE 59602520 T 19960513; ES 96107611 T 19960513; HU P9601314 A 19960516; JP 11507096 A 19960509; KR 19960015815 A 19960513; MX 9601821 A 19960515; NO 962019 A 19960515; RO 9600972 A 19960513; RU 96109711 A 19960515; SI 9630075 T 19960513; SK 61996 A 19960513; TR 9600394 A 19960514; TW 85105769 A 19960515; US 64895896 A 19960516; ZA 963198 A 19960422