

Title (en)

WATERBORNE LUBRICANT FOR THE COLD PLASTIC WORKING OF METALS

Title (de)

SCHMIERMITTEL AUF WASSERBASIS FÜR DIE PLASTISCHE VERARBEITUNG VON METALLEN

Title (fr)

LUBRIFIANT AQUEUX POUR LE FA ONNAGE PLASTIQUE A FROID DES METAUX

Publication

EP 0917559 B1 20130109 (EN)

Application

EP 97931112 A 19970623

Priority

- JP 18139696 A 19960621
- US 9710108 W 19970623

Abstract (en)

[origin: WO9748783A1] Waterborne lubricants comprising: (A) water-soluble inorganic salt; (B) homogeneously dispersed solid lubricant; (C) at least one homogeneously emulsified substance selected from mineral oils, animal and plant oils and fats, and synthetic oils; (D) surfactant; and (E) water, in which the weight ratio (B)/(A) is from 0.05:1 to 2:1 and the weight ratio {C/(A + B)} is from 0.05:1 to 1:1, provide a one-step, highly lubricating waterborne lubricant for use in the cold plastic working of metals. This waterborne lubricant can replace the conversion coating treatment (phosphate, oxalate, etc.) + reactive soap treatment combined lubrication system now in general use and is free of the environmental issues associated with the combined lubrication system, provides for facile coating removal, and is not subject to the decline in seizure resistance caused by nonuniform add-on when large numbers of workpieces are treated together by immersion.

IPC 8 full level

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US 9710108 W 19970623; CA 2258638 A 19970623; CN 97117136 A 19970621; EP 97931112 A 19970623; JP 18139696 A 19960621; KR 19970026283 A 19970620; TW 86108567 A 19970619