Title (en)

AQUEOUS LUBRICANT, METAL MATERIAL, AND METAL PROCESSED ARTICLES

Title (de)

WÄSSRIGES SCHMIERMITTEL, METALLMATERIAL UND VERARBEITETE METALLARTIKEL

Title (fr)

LUBRIFIANT AQUEUX, MATÉRIAU MÉTALLIQUE ET OBJETS MÉTALLIQUES TRAITÉS

Publication

EP 3296382 A4 20181010 (EN)

Application

EP 16796270 A 20160425

Priority

- JP 2015099651 A 20150515
- JP 2016062883 W 20160425

Abstract (en)

[origin: EP3296382A1] An aqueous lubricant for metal material plastic working, which can form a lubricating coating having excellent lubricity (moisture absorption resistance) under a high humidity environment, seizure resistance to metal working with high difficulty, and the like, and further has excellent long-term agent stability; a metal material having a lubricating coating formed by the aqueous lubricant on/over a surface of the metal material; and a metal processed article obtained by molding the metal material are provided. The above problem can be solved by using an aqueous lubricant for metal material plastic working in which an aliphatic polycarboxylic acid having 5 to 8 carbon atoms and a solubility in water at 20°C of 10 g/100 mL or more and an alkaline earth metal compound are blended in water, or an alkaline earth metal salt of the aliphatic polycarboxylic acid is dissolved or dispersed in water.

IPC 8 full level

C10M 105/26 (2006.01); **C10M 125/02** (2006.01); **C10M 125/10** (2006.01); **C10M 125/18** (2006.01); **C10M 125/22** (2006.01); **C10M 125/24** (2006.01); **C10M 125/26** (2006.01); **C10M 125/30** (2006.01); **C10M 129/34** (2006.01); **C10M 129/40** (2006.01); **C10M 129/42** (2006.01); **C10M 129/44** (2006.01); **C10M 159/06** (2006.01); **C10M 173/02** (2006.01); C10N 10/04 (2006.01); C10N 10/08 (2006.01); C10N 10/12 (2006.01); C10N 20/00 (2006.01); C10N 30/00 (2006.01); C10N 30/06 (2006.01)

CPC (source: EP US)

C10M 105/26 (2013.01 - EP US); **C10M 125/02** (2013.01 - US); **C10M 125/10** (2013.01 - EP US); **C10M 125/18** (2013.01 - US); **C10M 125/22** (2013.01 - EP US); **C10M 125/24** (2013.01 - US); **C10M 125/26** (2013.01 - EP US); **C10M 125/30** (2013.01 - EP US); **C10M 129/34** (2013.01 - EP US); **C10M 129/42** (2013.01 - EP US); **C10M 129/44** (2013.01 - EP US); **C10M 159/06** (2013.01 - EP US); **C10M 173/02** (2013.01 - EP US); C10M 2201/02 (2013.01 - EP US); C10M 2201/041 (2013.01 - EP US); C10M 2201/042 (2013.01 - EP US); C10M 2201/061 (2013.01 - EP US); C10M 2201/062 (2013.01 - EP US); C10M 2201/066 (2013.01 - EP US); C10M 2201/085 (2013.01 - EP US); C10M 2201/087 (2013.01 - EP US); C10M 2201/103 (2013.01 - EP US); C10M 2201/14 (2013.01 - EP US); C10M 2205/14 (2013.01 - EP US); C10M 2207/123 (2013.01 - EP US); C10M 2207/124 (2013.01 - EP US); C10M 2209/04 (2013.01 - EP US); C10M 2209/084 (2013.01 - EP US); C10M 2209/12 (2013.01 - EP US); C10N 2010/04 (2013.01 - EP US); C10N 2030/12 (2013.01 - EP US); C10N 2030/18 (2013.01 - EP US); C10N 2040/245 (2020.05 - EP US); C10N 2040/246 (2020.05 - EP US); C10N 2040/247 (2020.05 - EP US); C10N 2050/02 (2013.01 - EP US); C10N 2070/02 (2020.05 - EP US)

Citation (search report)

- [X] JP 2012255085 A 20121227 - DAIDO CHEM IND CO LTD, et al
- [X] EP 2352800 A2 20110810 - HONEYWELL INT INC [US]
- [X] EP 0617106 A1 19940928 - PHILLIPS PETROLEUM CO [US]
- [X] ZA 864678 B 19871028 - EXXON CHEMICAL PATENTS INC
- [X] CN 1210904 A 19990317 - WANG MEI [CN]
- [X] JP 2007262301 A 20071011 - KYODO YUSHI
- [X] WO 2007040678 A1 20070412 - ECOLAB INC [US], et al
- [A] WO 2015005142 A1 20150115 - NIHON PARKERIZING [JP] & EP 3020791 A1 20160518 - NIHON PARKERIZING [JP]
- See references of WO 2016185876A1

Cited by

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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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