

Title (en)  
COOLING LUBRICANT FOR THE COLD ROLLING OF ALUMINIUM

Title (de)  
KÜHLSCHMIERSTOFF FÜR DAS KALTWALZEN VON ALUMINIUM

Title (fr)  
LUBRIFIANT DE REFROIDISSEMENT POUR LAMINAGE À FROID DE L'ALUMINIUM

Publication  
**EP 3957708 A1 20220223 (DE)**

Application  
**EP 20191350 A 20200817**

Priority  
EP 20191350 A 20200817

Abstract (en)  
[origin: CA3191862A1] Described is a cooling lubricant for cold rolling aluminum, containing: - a mineral oil-based or synthetic lubricating base oil, - and a polyalkylene glycol or a compound that contains a polyalkylene oxide structure, the cooling lubricant not being water-soluble or water-miscible, and - the cooling lubricant being substantially free of fatty acids and fatty alcohols.

Abstract (de)  
Beschrieben wird ein Kühlschmierstoff für das Kaltwalzen von Aluminium, enthaltend- ein mineralölbasiertes oder synthetisches Grundöl,- einen Polyalkylenglykol oder eine eine Polyalkylenoxidstruktur enthaltende Verbindung, wobei- der Kühlschmierstoff nicht wasserlöslich oder mit Wasser mischbar ist und- der Kühlschmierstoff im Wesentlichen frei von Fettsäuren und Fettalkoholen ist.

IPC 8 full level  
**C10M 145/26** (2006.01); **C10M 145/28** (2006.01); **C10M 145/30** (2006.01); **C10M 145/32** (2006.01); **C10M 145/36** (2006.01); **C10N 20/00** (2006.01); **C10N 20/02** (2006.01); **C10N 30/00** (2006.01); **C10N 30/06** (2006.01); **C10N 40/20** (2006.01); **C10N 40/24** (2006.01)

CPC (source: EP KR US)  
**C10M 101/00** (2013.01 - US); **C10M 145/26** (2013.01 - EP KR); **C10M 145/28** (2013.01 - EP KR); **C10M 145/30** (2013.01 - EP KR); **C10M 145/32** (2013.01 - EP KR); **C10M 145/34** (2013.01 - US); **C10M 145/36** (2013.01 - EP KR); **C10M 169/041** (2013.01 - US); **C22F 1/04** (2013.01 - US); **C10M 2207/281** (2013.01 - EP KR); **C10M 2209/103** (2013.01 - EP KR); **C10M 2209/104** (2013.01 - EP KR); **C10M 2209/105** (2013.01 - EP KR); **C10M 2209/106** (2013.01 - EP KR); **C10M 2209/108** (2013.01 - EP KR); **C10N 2020/02** (2013.01 - EP KR); **C10N 2020/09** (2020.05 - EP KR); **C10N 2020/093** (2020.05 - US); **C10N 2030/06** (2013.01 - EP KR); **C10N 2030/24** (2020.05 - KR); **C10N 2030/40** (2020.05 - EP KR); **C10N 2040/24** (2013.01 - EP); **C10N 2040/243** (2020.05 - EP KR US); **C10N 2040/245** (2020.05 - EP KR US)

Citation (applicant)  
• EP 3124583 A1 20170201 - IDEMITSU KOSAN CO [JP]  
• EP 0484542 A1 19920513 - IDEMITSU KOSAN CO [JP]

Citation (search report)  
• [X] EP 2978828 A1 20160203 - DOW GLOBAL TECHNOLOGIES LLC [US]  
• [X] US 3919093 A 19751111 - DAVIS ROBERT H, et al  
• [X] US 3871837 A 19750318 - BEDAGUE PIERRE, et al  
• [X] US 4949566 A 19900821 - EICHELBAUM ROBERT [US]  
• [XD] EP 0484542 A1 19920513 - IDEMITSU KOSAN CO [JP]  
• [X] JP 2003096482 A 20030403 - NIPPON OIL CORP  
• [X] METALWORKING CHEMICALS: "Performance Products", 31 December 2010 (2010-12-31), XP055123809, Retrieved from the Internet <URL: [http://www.huntsman.com/performance\\_products/Media Library/a\\_MC348531CFA3EA9A2E040EBCD2B6B7B06/Products\\_MC348531D0B9FA9A2E040EBCD2B6B7B06/Amines\\_MC348531D0BECA9A2E040EBCD2B6B7B06/Morpholine\\_DGA\\_R\\_MC348531D0D20A9A2E040EBCD2B6B7B06/DIGLYCOLAMINE\\_R agen\\_MC348531D0DBAA9A2E040EBCD2B6B7B06/files/metalwo](http://www.huntsman.com/performance_products/Media Library/a_MC348531CFA3EA9A2E040EBCD2B6B7B06/Products_MC348531D0B9FA9A2E040EBCD2B6B7B06/Amines_MC348531D0BECA9A2E040EBCD2B6B7B06/Morpholine_DGA_R_MC348531D0D20A9A2E040EBCD2B6B7B06/DIGLYCOLAMINE_R agen_MC348531D0DBAA9A2E040EBCD2B6B7B06/files/metalwo)> [retrieved on 20140617]

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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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3957708 A1 20220223**; BR 112023002718 A2 20230314; CA 3191862 A1 20220224; CA 3191862 C 20240528; CN 115885025 A 20230331; CN 115885025 B 20240524; EP 4196558 A1 20230621; EP 4196558 B1 20240619; JP 2023535646 A 20230818; KR 102636604 B1 20240216; KR 20230052281 A 20230419; US 2023203395 A1 20230629; WO 2022038111 A1 20220224

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**EP 20191350 A 20200817**; BR 112023002718 A 20210817; CA 3191862 A 20210817; CN 202180050723 A 20210817; EP 2021072781 W 20210817; EP 21762692 A 20210817; JP 2023512129 A 20210817; KR 20237008238 A 20210817; US 202318171003 A 20230217