

Title (en)
AQUEOUS LUBRICATING COMPOSITION COMPRISING MOS2 NANOSHEET

Title (de)
WÄSSRIGE SCHMIERMITTELZUSAMMENSETZUNG MIT MOS2-NANOBLATT

Title (fr)
COMPOSITION LUBRIFIANTE AQUEUSE COMPRENANT UNE FEUILLE NANOMÉTRIQUE DE MOS2

Publication
EP 4112704 A1 20230104 (EN)

Application
EP 21305908 A 20210701

Priority
EP 21305908 A 20210701

Abstract (en)
The present invention relates to a lubricating composition comprising:- water, especially purified water, for example ultrapure water, demineralized water, osmotic water, deionized water;- glycerol;- nanosheets of h- MoS2, wherein the active content of h-MoS2 nanosheets is comprised between 0.01 and 0.07 wt%, preferably between 0.02 to 0.06 wt%, based on the total weight of the lubricating composition,- wherein, the nanosheets of h-MoS2 are obtained in-situ in the lubricating composition by liquid-phase exfoliation of bulk MoS2 particleswater

IPC 8 full level
C10M 125/22 (2006.01); **C10M 129/14** (2006.01); **C10M 171/06** (2006.01); **C10M 173/02** (2006.01); **C10N 10/12** (2006.01); **C10N 20/06** (2006.01); **C10N 30/06** (2006.01); **C10N 40/04** (2006.01)

CPC (source: EP)
C10M 125/22 (2013.01); **C10M 129/14** (2013.01); **C10M 171/06** (2013.01); **C10M 173/02** (2013.01); **C10M 2201/02** (2013.01); **C10M 2201/066** (2013.01); **C10M 2207/022** (2013.01); **C10N 2010/12** (2013.01); **C10N 2020/06** (2013.01); **C10N 2030/06** (2013.01); **C10N 2040/04** (2013.01); **C10N 2040/044** (2020.05)

Citation (search report)
• [I] CN 106520354 A 20170322 - UNIV QINGDAO, et al
• [A] US 2012149616 A1 20120614 - SCHMID-AMELUNXEN MARTIN [DE], et al
• [I] WANG YONGXIA ET AL: "Friction reduction of water based lubricant with highly dispersed functional MoS2nanosheets", COLLOIDS AND SURFACES A: PHYSIOCHEMICAL AND ENGINEERING ASPECTS, vol. 562, 22 November 2018 (2018-11-22), pages 321 - 328, XP085566909, ISSN: 0927-7757, DOI: 10.1016/J.COLSURFA.2018.11.047
• [A] YIJUN SHI ET AL: "Boundary and elastohydrodynamic lubrication studies of glycerol aqueous solutions as green lubricants", TRIBOLOGY INTERNATIONAL, vol. 69, 4 September 2013 (2013-09-04), AMSTERDAM, NL, pages 39 - 45, XP055445221, ISSN: 0301-679X, DOI: 10.1016/j.triboint.2013.08.013

Designated contracting state (EPC)
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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4112704 A1 20230104; CN 117580932 A 20240220; EP 4363535 A1 20240508; WO 2023275296 A1 20230105

DOCDB simple family (application)
EP 21305908 A 20210701; CN 202280046017 A 20220630; EP 2022068157 W 20220630; EP 22741245 A 20220630