

Title (en)  
METHOD OF FOR REDUCING WEAR ON SURFACES SUBJECTED TO FRICTIONAL FORCES

Publication  
**EP 0420868 B1 19930915 (EN)**

Application  
**EP 89906387 A 19890517**

Priority  
GB 8811696 A 19880518

Abstract (en)  
[origin: WO8911518A2] A method and composition for reducing wear on surfaces subjected to frictional forces. The lubricating compositions can be applied in a carrier which may be organic or inorganic in nature. They function by providing a regime in which multimolecular layers are adsorbed onto the surfaces to be protected, thus enabling comparatively thick protective films to be built up on the surfaces subjected to frictional wear. The molecules having this property are essentially single or condensed unsaturated ring systems which comprise at least one six-membered unsaturated heterocyclic ring comprising at least one heterocyclic moiety which acts as a hydrogen acceptor and a hydrogen donor moiety. If substituents are present they should not create steric hindrance and/or render the molecule so basic or acidic as to alter the steric geometry of the molecule as to prevent the interaction of the active groups.

IPC 1-7  
**C10L 1/22**; **C10M 133/38**; **C10M 133/40**

IPC 8 full level  
**C10L 1/18** (2006.01); **C10L 1/00** (2006.01); **C10L 1/22** (2006.01); **C10L 1/232** (2006.01); **C10L 10/08** (2006.01); **C10M 133/38** (2006.01); **C10M 133/40** (2006.01); **C10M 169/04** (2006.01); **C10M 173/00** (2006.01); **C10N 30/06** (2006.01)

CPC (source: EP KR)  
**C10L 1/232** (2013.01 - EP); **C10L 10/08** (2013.01 - EP); **C10M 107/44** (2013.01 - EP); **C10M 133/38** (2013.01 - EP KR); **C10M 133/40** (2013.01 - EP); **C10M 169/04** (2013.01 - EP); **C10M 173/00** (2013.01 - EP); **C10M 2201/02** (2013.01 - EP); **C10M 2215/22** (2013.01 - EP); **C10M 2215/221** (2013.01 - EP); **C10M 2215/225** (2013.01 - EP); **C10M 2215/226** (2013.01 - EP); **C10M 2215/30** (2013.01 - EP); **C10M 2217/0403** (2013.01 - EP); **C10M 2217/0415** (2013.01 - EP); **C10M 2217/0425** (2013.01 - EP); **C10M 2217/0435** (2013.01 - EP); **C10M 2217/044** (2013.01 - EP); **C10M 2217/0443** (2013.01 - EP); **C10M 2217/045** (2013.01 - EP); **C10M 2217/0453** (2013.01 - EP); **C10M 2217/0465** (2013.01 - EP); **C10N 2050/01** (2020.05 - EP)

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)  
**WO 8911518 A2 19891130**; **WO 8911518 A3 19900208**; AU 3697789 A 19891212; AU 622912 B2 19920430; CA 1337292 C 19951010; DE 68909236 D1 19931021; DE 68909236 T2 19940317; DK 274090 A 19901116; DK 274090 D0 19901116; EP 0420868 A1 19910410; EP 0420868 B1 19930915; ES 2017252 A6 19910116; FI 905592 A0 19901112; GB 8811696 D0 19880622; HU 209491 B 19940628; HU 893619 D0 19910528; HU T56389 A 19910828; IE 61949 B1 19941130; IE 891588 L 19891118; JP H03504252 A 19910919; KR 900701977 A 19901205; NO 302300 B1 19980216; NO 904941 D0 19901114; NO 904941 L 19901114; NZ 229188 A 19910426; ZA 893729 B 19910130

DOCDB simple family (application)  
**GB 8900530 W 19890517**; AU 3697789 A 19890517; CA 599824 A 19890516; DE 68909236 T 19890517; DK 274090 A 19901116; EP 89906387 A 19890517; ES 8901653 A 19890517; FI 905592 A 19901112; GB 8811696 A 19880518; HU 361989 A 19890517; IE 158889 A 19890517; JP 50561589 A 19890517; KR 900700080 A 19900116; NO 904941 A 19901114; NZ 22918889 A 19890518; ZA 893729 A 19890518