

Title (en)  
PROCESS AND COMPOSITION FOR TREATING METALS

Title (de)  
VERFAHREN UND ZUSAMMENSETZUNG ZUR BEHANDLUNG VON METALLEN

Title (fr)  
PROCEDE ET COMPOSITION DE TRAITEMENT POUR DES METAUX

Publication  
**EP 1230422 A1 20020814 (EN)**

Application  
**EP 00955557 A 20000814**

Priority

- JP 23009499 A 19990816
- US 0022363 W 20000814

Abstract (en)  
[origin: WO0112876A1] An aqueous liquid surface treatment composition that comprises (i) molecules each of which contains at least two moieties that conform to general formula (I) wherein each of R<1>, R<2>, and R<3> is independently selected from the group consisting of hydrogen atoms and alkyl moieties containing from 1 to 4 carbon atoms, all of these molecules together having a quotient of average molecular weight to the average number per molecules of moieties conforming to formula (I) that is within a range from 100 to 30,000, and (ii) one or more substances selected from the group consisting of organic acids, phosphoric acid, hydrofluoric acid, tetrafluoroboric acid, hexafluorosilicic acid, hexafluorotitanic acid, hexafluorozirconic acid, hexafluorohafnic acid, and ammonium salts of organic acids, phosphoric acid, hydrofluoric acid, tetrafluoroboric acid, hexafluorosilicic acid, hexafluorotitanic acid, hexafluorozirconic acid, and hexafluorohafnic acid produces a highly corrosion-resistant, strongly paint-adherent film on metal surfaces without using a chromium containing composition.

IPC 1-7  
**C23C 22/05**; **C23C 22/00**; **C09D 5/00**; **C09D 183/00**

IPC 8 full level  
**C23C 22/17** (2006.01); **C23C 16/00** (2006.01); **C23C 22/00** (2006.01); **C23C 22/07** (2006.01); **C23C 22/08** (2006.01); **C23C 22/34** (2006.01); **C23C 22/36** (2006.01); **C23C 22/42** (2006.01); **C23C 22/44** (2006.01); **C23C 22/46** (2006.01)

CPC (source: EP KR)  
**C23C 16/00** (2013.01 - KR); **C23C 22/08** (2013.01 - EP); **C23C 22/34** (2013.01 - EP); **C23C 22/36** (2013.01 - EP); **C23C 22/42** (2013.01 - EP); **C23C 22/44** (2013.01 - EP); **C23C 22/46** (2013.01 - EP); **C23C 2222/20** (2013.01 - EP)

Citation (search report)  
See references of WO 0112876A1

Designated contracting state (EPC)  
AT BE DE ES FR GB

DOCDB simple family (publication)  
**WO 0112876 A1 20010222**; CA 2383485 A1 20010222; EP 1230422 A1 20020814; JP 2001049453 A 20010220; JP 4113309 B2 20080709; KR 100676602 B1 20070130; KR 20010021220 A 20010315; MX PA02001637 A 20020806

DOCDB simple family (application)  
**US 0022363 W 20000814**; CA 2383485 A 20000814; EP 00955557 A 20000814; JP 23009499 A 19990816; KR 20000045222 A 20000804; MX PA02001637 A 20000814