

Title (en)  
Lubricating and cooling agent.

Title (de)  
Schmier- und Kühlmittel für die Metallbearbeitung.

Title (fr)  
Agent lubrifiant et réfrigérant.

Publication  
**EP 0011224 A1 19800528 (DE)**

Application  
**EP 79104352 A 19791107**

Priority  
DE 2850244 A 19781120

Abstract (en)  
[origin: US4268404A] The invention relates to a long chain ammonium polyphosphate and its use as an effective additive in lubricants and/or coolants for metal working under extremely high pressures and temperatures. The polyphosphate chain preferably contains 50 to 1000 phosphorus atoms. Up to 20% of the ammonium groups are replaceable by hydrogen. The additive is preferably added to the lubricant/coolant in a proportion of 0.1 to 30 weight %.

Abstract (de)  
Langkettiges Ammoniumpolyphosphat ist ein gutes Additiv in Schmier- und Kühlmitteln bei Metallbearbeitungen, die unter extrem hohen Drücken und Temperaturen durchgeführt werden. Die Polyphosphatkette soll 50 bis 1000 Phosphoratome enthalten. Bis zu 20% der Ammoniumgruppen sind durch Wasserstoff ersetzbar. Das Additiv wird dem Schmier- und Kühlmittel in einer Menge von 0,1 bis 30 Gew% zugesetzt.

IPC 1-7  
**C10M 1/10; C10M 3/02**

IPC 8 full level  
**C10M 125/24** (2006.01)

CPC (source: EP US)  
**C10M 125/24** (2013.01 - EP US); **C10M 2201/02** (2013.01 - EP US); **C10M 2201/085** (2013.01 - EP US); **C10M 2205/00** (2013.01 - EP US); **C10M 2207/123** (2013.01 - EP US); **C10M 2207/129** (2013.01 - EP US); **C10M 2207/22** (2013.01 - EP US); **C10M 2209/104** (2013.01 - EP US); **C10M 2215/068** (2013.01 - EP US); **C10M 2215/22** (2013.01 - EP US); **C10M 2215/221** (2013.01 - EP US); **C10M 2215/225** (2013.01 - EP US); **C10M 2215/226** (2013.01 - EP US); **C10M 2215/30** (2013.01 - EP US); **C10M 2223/041** (2013.01 - EP US); **C10M 2223/043** (2013.01 - EP US); **C10M 2223/047** (2013.01 - EP US); **C10M 2225/00** (2013.01 - EP US); **C10M 2225/02** (2013.01 - EP US); **C10N 2040/22** (2013.01 - EP US); **C10N 2040/24** (2013.01 - EP US); **C10N 2040/241** (2020.05 - EP US); **C10N 2040/242** (2020.05 - EP US); **C10N 2040/243** (2020.05 - EP US); **C10N 2040/244** (2020.05 - EP US); **C10N 2040/245** (2020.05 - EP US); **C10N 2040/246** (2020.05 - EP US); **C10N 2040/247** (2020.05 - EP US)

Citation (search report)

- DE 901833 C 19540114 - BAYER AG
- US 2423144 A 19470701 - GREGG GEORGE W
- US 3637498 A 19720125 - SAWYER DAVID W

Cited by  
FR2547311A1

Designated contracting state (EPC)  
BE CH DE FR GB IT NL

DOCDB simple family (publication)  
**EP 0011224 A1 19800528; EP 0011224 B1 19820901**; DE 2850244 A1 19800529; DE 2963625 D1 19821028; US 4268404 A 19810519

DOCDB simple family (application)  
**EP 79104352 A 19791107**; DE 2850244 A 19781120; DE 2963625 T 19791107; US 9389579 A 19791113