

Title (en)  
FUEL FOR SPARK IGNITION ENGINES

Publication  
**EP 0342497 A3 19900328 (DE)**

Application  
**EP 89108374 A 19890510**

Priority  
DE 3817000 A 19880519

Abstract (en)  
[origin: EP0342497A2] The invention relates to fuels for spark-ignition engines, containing small quantities of copolymers of alkyl (meth)acrylates having 8 to 40 C atoms in the alkyl radical and/or vinyl esters of carboxylic acids containing 8 to 40 C atoms and monoethylenically unsaturated mono- and/or di-carboxylic acids having 3 to 12 C atoms and/or monoethylenically unsaturated compounds with sulphonic and/or phosphonic acid groups, having a total molecular mass from 500 to 20,000 g per mole, the carboxyl groups, sulphonic acid groups and phosphonic acid groups of the copolymers having been wholly or partially reacted with alkali or an alkaline earth to form the alkali metal salts or alkaline earth metal salts and the remainder of the acid groups having been reacted with ammonia and/or amines having up to 50 C atoms to give the corresponding amide groups and/or ammonium salts.

IPC 1-7  
**C10L 1/18**; **C10L 1/22**; **C10L 1/24**; **C10L 1/26**; **C08F 8/44**

IPC 8 full level  
**C10L 1/224** (2006.01); **C08F 8/44** (2006.01); **C10L 1/18** (2006.01); **C10L 1/196** (2006.01); **C10L 1/197** (2006.01); **C10L 1/22** (2006.01); **C10L 1/24** (2006.01); **C10L 1/26** (2006.01); **C10L 1/30** (2006.01); **C10L 10/08** (2006.01); **F02B 1/04** (2006.01)

CPC (source: EP US)  
**C10L 1/1963** (2013.01 - EP US); **C10L 1/1966** (2013.01 - EP US); **C10L 1/1973** (2013.01 - EP US); **C10L 1/2468** (2013.01 - EP US); **C10L 1/2675** (2013.01 - EP US); **C10L 10/04** (2013.01 - EP US); **C10L 10/08** (2013.01 - EP US); **F02B 1/04** (2013.01 - EP US)

Citation (search report)

- [X] FR 1258027 A 19610407 - SHELL INT RESEARCH
- [X] EP 0154177 A2 19850911 - BAYER AG [DE]
- [A] US 3506625 A 19700414 - PATINKIN SEYMOUR H, et al
- [A] GB 1154966 A 19690611 - SHELL INT RESEARCH [NL]
- [A] GB 802589 A 19581008 - CALIFORNIA RESEARCH CORP
- [A] PATENT ABSTRACTS OF JAPAN, Band 5, Nr. 111 (C-63)[783], 18. Juli 1981; & JP-A-56 050 996 (NIPPON SEKIYU KAGAKU K.K.) 08-05-1981
- [A] PATENT ABSTRACTS OF JAPAN, Band 11, Nr. 193 (C-430)[2640], 20. Juni 1987; & JP-A-62 018 494 (KAO CORP.) 27-01-1987

Cited by  
ES2082695A1; WO2012156165A1

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

DOCDB simple family (publication)  
**EP 0342497 A2 19891123**; **EP 0342497 A3 19900328**; **EP 0342497 B1 19920722**; AT E78508 T1 19920815; DD 283869 A5 19901024; DE 3817000 A1 19891123; DE 58901869 D1 19920827; ES 2043940 T3 19940101; JP H0218495 A 19900122; US 5009670 A 19910423

DOCDB simple family (application)  
**EP 89108374 A 19890510**; AT 89108374 T 19890510; DD 32874689 A 19890519; DE 3817000 A 19880519; DE 58901869 T 19890510; ES 89108374 T 19890510; JP 12461189 A 19890519; US 35241889 A 19890516