

Title (en)
Multifunctional viscosity index improver derived from polyamine containing one primary amino group and at least one secondary amino group exhibiting improved low temperature viscometric properties.

Title (de)
Multifunktionaler Viskositätsindexverbesserer, hergestellt aus Polyamin, welcher eine primäre und mindestens eine sekundäre Amino-Gruppe enthält und der verbesserte viskometrische Eigenschaften bei niedrigen Temperaturen aufweist.

Title (fr)
Agent améliorant l'indice de viscosité à buts multiples dérivé de polyamine contenant un groupe amine primaire et au moins un groupe amine secondaire et présentant des propriétés viscométriques améliorées à basse température.

Publication
EP 0400870 A1 19901205 (EN)

Application
EP 90305567 A 19900522

Priority
US 35872989 A 19890530

Abstract (en)
Composition of matter useful as a multifunctional viscosity index improver for lubricating oils comprising reaction product of: (i) (a) copolymer of ethylene and at least one other alpha-olefin monomer, said copolymer comprising intramolecularly heterogeneous copolymer chains containing at least one crystallizable segment of methylene units and at least one low crystallinity ethylene-alpha-olefin copolymer segment, wherein said at least one crystallizable segment comprises at least about 10 weight percent of said copolymer chain and contains at least about 57 weight percent of said copolymer chain and contains at least about 57 weight percent ethylene, wherein said low crystallinity segment contains not greater than about 53 weight percent ethylene, and wherein said copolymer has a molecular weight distribution characterized by at least one of a ratio of Mw/Mn of less than 2 and a ratio of Mz/Mw of less than 1.8 and wherein at least two portions of an individual intramolecularly heterogeneous chain, each portion comprising at least 5 weight percent of said chain, differ in composition from one another by at least 7 weight percent ethylene, said copolymer grafted with (b) ethylenically monounsaturated carboxylic acid material having 1 to 2 carboxylic acid groups or anhydride group to form grafted ethylene copolymer; and (ii) at least one polyamine containing one primary amino group and from 1 to about 6 secondary amino groups. h

IPC 1-7
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C-Set (source: EP)
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2. **C10M 149/06** + **C10M 143/02** + **C10M 143/00**
3. **C10M 151/02** + **C10M 143/02** + **C10M 143/00**

Citation (search report)
• [A] EP 0299608 A1 19890118 - EXXON CHEMICAL PATENTS INC [US]
• [AD] DE 3025274 A1 19810108 - EXXON RESEARCH ENGINEERING CO
• [A] EP 0050994 A1 19820505 - COOPER EDWIN INC [US]
• [A] EP 0146162 A2 19850626 - EXXON RESEARCH ENGINEERING CO [US]

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