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(54) Title: ALKYL PHENOLGLYOXAL RESINS AND THEIR USE AS DEMULSIFIERS

(54) Bezeichnung: ALKYLPHENOLGLYOXALHARZE UND IHRE VERWENDUNG ALS EMULSIONSSPALTER

(57) Abstract: The invention relates to resins that can be obtained from compounds of formula (1), in which substituents R¹ and OH can, with regard to one another, be located in ortho position, meta position or para position, and R¹ represents C₁-C₃₀ alkyl, C₂-C₃₀ alkenyl, C₆-C₁₈ aryl or C₇-C₃₀ alkyl aryl. The inventive resins are produced using the following steps, which can be carried out in any order: A) reacting with glyoxal; and B) alkoxylation with a C₂-C₄ alkylene oxide in molar excess so that the resulting alkoxylate has a degree of alkoxylation of 1 to 100 alkylene oxide units per OH group. In addition, the inventive resins have a molecular weight ranging from 250 to 100,000 units. The invention also relates to the use of these resins as demulsifiers for oil-in-water emulsions, in particular, in the domain of petroleum extraction.

(57) Zusammenfassung: Gegenstand der Erfindung sind Harze, erhältlich aus Verbindungen der Formel (1), in denen die Substituenten R¹ und OH zueinander in ortho-, meta- oder para-Stellung stehen können, und R¹ für C₁-C₃₀-Alkyl, C₂-C₃₀-Alkenyl, C₆-C₁₈-Aryl oder C₇-C₃₀-Alkylaryl steht, durch die in beliebiger Reihenfolge ausführbaren Schritte A) Umsetzung mit Glyoxal und B) Alkoxylierung mit einem C₂-C₄-Alkylenoxid im molaren Überschuss, so dass das entstehende Alkoxyolat einen Alkoxylierungsgrad von 1 bis 100 Alkylenoxideinheiten pro OH-Gruppe aufweist, um die ein Molekulargewicht von 250 bis 100.000 Einheiten aufweisen, sowie deren Verwendung als Spalter für Öl/Wasser-emulsionen, insbesondere in der Erdölförderung.

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