

UNITED STATES PATENT OFFICE

2,257,183

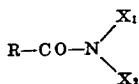
WETTING AGENT USEFUL FOR ALKALINE MERCERIZING SOLUTIONS

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3 Claims. (Cl. 8-127)

Our present invention relates to wetting agents useful for alkaline mercerizing solutions, more particularly to those of the general formula



wherein R stands for the radicle of an aliphatic hydrocarbon containing 4 to 8 carbon atoms, and X₁ and X₂ for aliphatic hydrocarbon radicles, each containing more than one carbon atom and at least one and at the most two hydroxy groups.

According to the length of the carbon chain of the fatty acid radicle and the number of the water-solubilizing hydroxy groups, these amides may be easily soluble or they may be practically insoluble in mercerizing solutions. In the latter case they may be dissolved by the addition of one of the known dispersing agents.

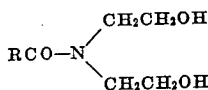
The aforesaid fatty acids of 5 to 9 carbon atoms can be obtained by starting from natural products. They are formed as by-products in the process of oxidizing paraffin to soap forming fatty acids, and therefore, their application is of importance. Moreover, those acids with a branched chain may be used which are obtainable by oxidizing higher alcohols which are formed within the methanol synthesis.

The preparation of the hydroxyalkylamides is performed in the known manner by starting from the acids or their functional derivatives.

In order to further illustrate our invention the following examples are given, the parts being by weight. We wish it however to be understood, that our invention is not limited to the particular products or reaction conditions mentioned therein.

Example 1

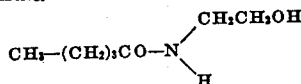
The mixture of fatty acids containing 7 to 9 carbon atoms in their molecule, which is formed in the process of oxidizing paraffin, is converted in the known manner into the diethanolamide of the formula



wherein R stands for an aliphatic radical containing six to eight carbon atoms which is a viscous liquor, clearly soluble in a caustic soda solution of 30° Bé. Mercerizing solutions containing 5 to 10 grams thereof per liter are capable of wetting raw cotton nearly instantly.

Example 2

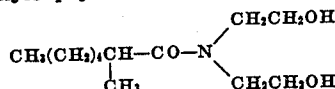
When mixing the corresponding diethanolamide of a mixture of fatty acids containing 5 to 7 carbon atoms with the same amount of the monoethanolamide of the normal-valeric acid of the formula



a likewise excellent wetting agent useful for alkaline mercerizing solutions is obtained.

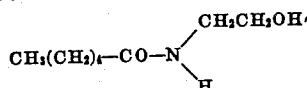
Example 3

A mixture of 20 parts of the diethanolamide of α -methylcaprylic acid of the formula



40 parts of raw xyleneol and 40 parts of raw cresol is a very effective wetting agent useful for alkaline mercerizing solutions.

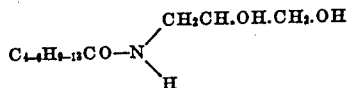
When replacing the aforesaid diethanolamide by the same amount of capronic acid monoethanolamide of the formula



a likewise good wetting agent is obtained, 10 grams thereof are easily soluble in 1 liter of a caustic soda solution of 30° Bé.

Example 4

20 parts of a hydroxyalkylamide of the formula



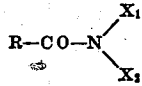
and 80 parts of cresol are mixed. 5 grams of this mixture are clearly soluble in 1 liter of a caustic soda solution of 30° Bé. The solution obtained exhibits a good wetting effect.

Example 5

5 grams of a mixture of 50 parts of the monoethanolamide of valeric acid (cf. Example 2) and of 50 parts of a highly sulfonated derivative of oleic acid (cf. British specification 293,717) are dissolved in one liter of a caustic soda solution of 30° Bé. The solution obtained exhibits a very good wetting effect.

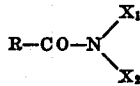
We claim:

1. As a composition of matter an alkaline mer-
cerizing bath containing a compound of the for-
mula



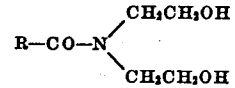
wherein R stands for the radicle of an aliphatic
hydrocarbon containing 4 to 8 carbon atoms and
X₁ and X₂ for aliphatic hydrocarbon radicles,
each containing more than one carbon atom and
at least one and at the most two hydroxy groups.

2. As a composition of matter an alkaline mer-
cerizing bath containing a compound of the for-
mula



wherein R stands for the radicle of an aliphatic
hydrocarbon containing 6 to 8 carbon atoms, and
X₁ and X₂ for aliphatic hydrocarbon radicles,
each containing more than one carbon atom and
at least one and at the most two hydroxy groups.

3. As a composition of matter an alkaline mer-
cerizing bath containing a compound of the for-
mula



wherein R stands for an aliphatic hydrocarbon
radical containing six to eight carbon atoms.

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