

UNITED STATES PATENT OFFICE

2,009,612

COMPOSITION FOR OILING TEXTILE FIBERS

Sigismund Fuchs and Georg Schulz, Frankfort-on-the-Main-Hochst, Germany, assignors to General Aniline Works, Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application December 29, 1933, Serial No. 704,599. In Germany December 31, 1932

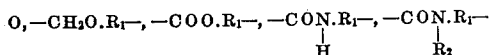
6 Claims. (Cl. 87-9)

The present invention relates to compositions for oiling textile fibers.

We have found that for oiling textile fibers, such as wool, half-wool or cotton, there may be used compositions which contain about 100 parts of a water-soluble substance of the following general formula:



wherein X stands for



R stands for an aliphatic radical with at least 7 carbon atoms, R₁ and R₂ stand for aliphatic or aromatic radicals and Me stands for an alkali metal or ammonium, at most 100 parts of oleic acid, at most 100 parts of a neutral oil and about 1000 to 3000 parts of water. As water-soluble compounds which are built up upon a base of a fatty acid or a fat alcohol there may be mentioned, for instance, the alkali salts of oleylhydroxyethane sulfonic acid, of oleylphenyl-taurine, of oleylmethyl-taurine, of the ester from stearic acid and phenol sulfonic acid, of the ether from n-dodecyl-alcohol and hydroxyethane-sulfonic acid, of the sulfuric ester acid from stearyl alcohol.

The mixtures are advantageously prepared by treating an alkali salt of one of the above mentioned fatty bodies with oleic acid and a neutral oil such as, for instance, olive oil, earthnut oil or paraffin oil in the absence of water, if required at raised temperature and by introducing, while stirring, water into the mixture whereby emulsions are formed. There may be added to the mixtures or emulsions additional substances such as, for instance, alkali (ammonia) salts (ammonium salts), fats, oils, solvents or the like. According to the quantity of water used in each case there are obtained pastes or mobile liquid emulsions. The latter may be used without further dilution for oiling textile fibers.

For instance, by stirring together a body of the above given general formula and a mixture consisting of 10% of olive oil and 10% of oleic acid—calculated on the weight of the said body—in the presence of water, a paste for oiling may be prepared which by simply stirring with water up to and even exceeding the proportion of 1:30 yields stable emulsions which do not tend to separate oil and to which there may even be added further quantities of oil amounting to 20% and more calculated upon the oiling paste.

The composition for oiling textile fibers can

be readily eliminated from the fiber by simply washing it in an alkaline or neutral agent, even if the above mentioned additional quantities of oil have been added.

The following examples serve to illustrate our invention but they are not intended to limit it thereto, the parts being by weight:

(1) 500 parts of hot water are poured on 1000 parts of oleylmethyl taurine and to this mixture there is added, while stirring, a mixture of 20 parts of oleic acid, 300 parts of olive oil and 500 parts of water. There is obtained a yellowish, viscous paste having a fatty feel which may be used as oiling agent in dilutions of, for instance, 1:10 or 1:20.

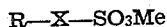
(2) 750 parts of hot water are poured on 1500 parts of the sodium salt of the sulfuric acid ester of dodecyl alcohol and the whole is stirred until cold. After addition of 10 parts of concentrated ammonia there are introduced, while stirring, a mixture of 250 parts of oleic acid and 30 parts of earth-nut oil and 400 parts of hot water. If the kind of the spinning material requires a further oiling, about 0.5 part of oleic acid or olive oil is added for 1 part of this paste and the mixture is diluted by addition of hot or cold water so as to yield 30 parts of oiling agent.

(3) 1000 parts of the sodium salt of oleylhydroxyethane sulfonic acid and a mixture of 600 parts of oleic acid and 200 parts of mineral-oil are heated together and the whole is stirred with 1000 parts of water. There is obtained a paste which, on addition of a further quantity of water in about the proportion of 1-20, yields a stable emulsion which is very suitable for oiling spinning fibers.

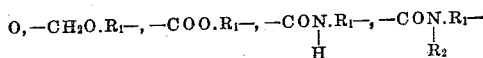
(4) 1000 parts of the sodium salt of the sulfuric acid ester of oleyl alcohol are stirred with 2000 parts of water and into the paste thus obtained there are slowly introduced 400 parts of oleic acid and then 500 parts of earth-nut oil, while stirring. After further addition of 10000 parts of water, there is obtained a stable, finely dispersed emulsion which may directly be used as oiling agent.

We claim:

1. A composition for oiling textile fibers comprising 100 parts of a body of the following general formula:



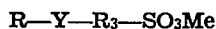
wherein X stands for



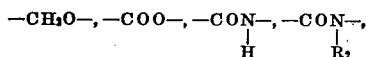
and R stands for an aliphatic radical with at

least 7 carbon atoms, R_1 and R_2 stands for aliphatic or aromatic radicals, Me stands for an alkali metal or ammonium, at most 100 parts of oleic acid, at most 100 parts of a neutral oil and about 1000 to 3000 parts of water.

2. A composition for oiling fibers comprising 100 parts of a body of the following general formula:

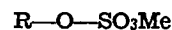


wherein Y stands for the groups



R stands for an aliphatic radical with at least 7 carbon atoms, R_2 and R_3 stand for aliphatic or aromatic radicals, Me stands for an alkali metal or ammonium, at most 100 parts of oleic acid, at most 100 parts of a neutral oil and about 1000 to 3000 parts of water.

3. A composition for oiling textile fibers comprising 100 parts of a body of the following general formula:



wherein R stands for an aliphatic radical with at least 7 carbon atoms and Me stands for an alkali metal or ammonium, at most 100 parts of oleic acid, at most 100 parts of a neutral oil and about 1000 to 3000 parts of water.

4. A composition for oiling textile fibers comprising 100 parts of the sodium salt of the sulfuric acid ester of dodecyl alcohol, about 30 parts of oleic acid, about 30 parts of a neutral oil and about 1000 to 3000 parts of water.

5. A composition for oiling textile fibers comprising 100 parts of the sodium salt of oleyloxethane sulfonic acid, about 60 parts of oleic acid, about 20 parts of a neutral oil and about 1000 to 3000 parts of water.

6. A composition for oiling textile fibers comprising 100 parts of the sodium salt of oleylmethyltaurine, 2 parts of oleic acid, 30 parts of olive oil and 1000 parts of water.

SIGISMUND FUCHS.
GEORG SCHULZ.