United States Patent Office 3,795,611 Patented Mar. 5, 1974



3,795,611

# FABRIC SOFTENING COMPOSITIONS

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No Drawing. Filed Dec. 28, 1970, Ser. No. 102,111
Int. Cl. C11d 3/32; D06m 13/40
U.S. Cl. 252—8.75 8 Claims

## ABSTRACT OF THE DISCLOSURE

A fabric softening composition comprising the higher alkyl amides of 2-amino-2-methyl-1-propanol or 2-amino-2-ethyl-1,3-propandediol either alone or in combination with detergent materials and a method of softening fabrics utilizing said composition.

The instant invention relates to novel fabric softening compositions and a method for using same which compositions comprise the higher alkyl amides derived from 2-amino-2-methyl-1-propanol or 2-amino-2-ethyl-1,3-propandediol. In particular the instant invention is directed to the use of the above noted amides either alone as fabric softeners and/or in combination with other conventional laundering additives.

The art of treating textile materials with such agents as brighteners, softeners, antistatic agents, germicidal agents and the like is at this point a fairly well developed and commercially important industry. In almost every instance a textile material is finished by the finishing mill prior to its formation into a garment or wearing apparel. Some of the finishes which are applied in the mill remain for a period of time; however, others are removed within a relatively short period of time and usually after or during the first or subsequent washings of the textile material. Textile fibers such as wool and cotton as well as synthetic fibers suc has nylon. Dacron polyester, Orlon acrylic fiber and the like are all conventionally treated subsequent to the preparation of the fiber and/or garment so as to render them more suitable for wearing. Furthermore, fabrics and garments are also treated so as to make them more acceptable to the general public. Among the desirable properties that may be provided by finishing the textile fabric or garment are enhanced softness, antistatic activity, wrinkle resistance, stiffness or firmness, shape retention, rot resistance and the like. The particular end use of the fabric in general governs the nature of the property modifications provided by the finishing mill. It is not, however, generally feasible to effect all property modifications on a single fabric. Moreover, there are many fabrics that are not subjected to mill finishing at all. Therefore, there are many fabrics and garments made from unfinished goods which end up in the hands of the ultimate consumer which garments would have enhanced value if the properties thereof could be modified.

It is also well known that many of the treatments applied in mill finishing are not durably fixed to the fabric. Because of this, desirable properties initially present on a particular fabric are lost after initial or subsequent washings thereof. It is obvious, therefore, that the various fabrics or garments need subsequent treatment by the consumer to realize utmost utility and comfort.

The use of various and diverse chemical materials and particularly cationic quaternary ammonium compounds as softeners for textile products is very well known in the art. It is also well known to employ such materials for their softening effect during the laundering operation and particularly in the rinse cycle of the laundering process. This technique has been necessitated by the fact that the softeners heretofore employed, being mainly cationic in nature, are not compatible with the major type of detergent used in the washing cycle. By far the predominant



type of detergent used in home laundering processes is anionic in nature and more particularly is of the alkali metal higher-alkyl benzene sulfonate type. These anionic detergents include compounds such as alkyl-benzene-sulfonic acid and its salts which compounds have the formula alkyl-phenyl-$SO_3$—M, wherein alkyl is an alkyl radical of $C_8$ to $C_{22}$ and preferably $C_{10}$ to $C_{18}$ and M is hydrogen or an alkali metal, which compounds comprise a well-known class of anionic detergents and include sodium dodecylbenzene sulfonate, potassium dodecylbenzene sulfonate, sodium laurylbenzene sulfonate, sodium cetylbenzene sulfonate. Others are the alkali metal salts of the paraffin sulfonic acids, alkyl sulfates, olefin sulfonates, alcohol ether sulfates, and alkylphenoxyethoxyethanol sulfates such as sodium hexadecanesulfonate, sodium tetradecane sulfonate, sodium n-lauryl sulfate, sodium n-hexadecyl sulfate, sodium octylphenoxynonaethoxyethylsulfate, sodium dodecenyl-1 sulfonate, sodium hexadecenyl-1 sulfonate, and sodium lauroxypentaethoxyethanol sulfate.

Among the above-noted alkylbenzene sulfonic acid and salts thereof, the compounds which are most generally employed in commercial detergent compositions include those which are biodegradable and which are particularly characterized by a linear alkyl substituent of from $C_{10}$ to $C_{22}$ and preferably from $C_{12}$ to $C_{15}$. It is, of course, understood that the carbon chain length represents, in general, an average chain length since the method for producing such products usually employs alkylating reagents of mixed chain length. It is clear, however, that substantially pure olefins as well as alkylating compounds used in other techniques can and do give alkylated benzene sulfonates wherein the alkyl moiety is substantially (i.e. at least 99%) of one chain length, i.e., $C_{12}$, $C_{13}$, $C_{14}$, or $C_{15}$. The linear alkyl benzene sulfonates are further characterized by the position of the benzene ring in the linear alkyl chain, with any of the positions isomers (i.e. alpha to omega) being operable and contemplated.

When one employs a cationic substance such as the aforementioned cationic quaternary ammonium softening compounds in conjunction with or in combination with an anionic detergent material such as those discussed above, there results a composition which is completely ineffective as a fabric softener. This manifestation of incompatibility is also undesirable inasmuch as it removes detergent from the wash cycle and therefore, requires the addition of extra detergent so as to accomplish the necessary and desired washing process. As a consequence of these difficulties it is necessary to add the presently available cationic softeners to the clothes in the absence of any anionic detergent and therefore, these cationic softening materials are conventionally added during the rinse cycle as distinguished from the wash cycle in the washing process.

It is also well known that there is a tendency for laundered articles to yellow when treated with cationic agents. This yellowing of the textiles treated with cationics is believed to be caused by: (1) highly colored impurities or byproducts in some commercial cationic finishing agensts, or (2) the presence of high amounts of iron in the finishing agents that may cause staining typical of iron compounds, or (3) due to the presence of alkali when the materials treated with the cationics are ironed or pressed.

A further disadvantage of the cationic fabric softeners is that many of them are waxy or gummy in nature, making them difficult to weigh or measure, to mix or disperse with other textile-treating agents, and to place them in a form which may be readily applied to textiles.

Therefore it is an object of the instant invention to provide a fabric softening composition which may be used in conjunction with conventional detergent compositions.

Another object of the instant invention is to provide a detergent composition containing therein a fabric softening agent.

A further object of the instant invention is to provide a fabric softening composition which may be introduced into the wash simultaneously with conventional laundering detergents during a process of laundering textiles.

A still further object of the instant invention is to provide a fabric softening composition which may be employed in conjunction with detergents and other cleaning, brightening and laundering additives in a single-step laundering operation.

Yet another object of the instant invention is to provide a fabric softening composition comprising the higher alkyl amides derived from 2-amino-2-methyl-1-propanol or 2-amino-2-ethyl-1,3-propandediol.

A still further object of the instant invention is to provide a method of softening fabrics comprising contacting said fabrics with a higher alkyl amide derived from 2-amino-2-methyl-1-propanol or 2-amino-2-ethyl-1,3-propandediol.

Still further objects and advantages of the instant invention will become apparent from the following more detailed description thereof which appears hereinafter.

The novel fabric softening compositions of the instant invention contain as the essential ingredient a higher alkyl amide derived from 2-amino-2-methyl-1-propanol or 2-amino-2-ethyl-1,3-propandediol wherein the alkyl grouping contained therein has from about 10 to about 26 carbon atoms and preferably from about 10 to about 17 carbon atoms. Said amides may be manufactured by utilizing as starting materials a higher fatty acid such as for example lauric, myristic, palmitic, stearic, oleic acid and the like. In addition one may use carboxylic acids containing as noted from 10 to 26 carbon atoms such as for example decanoic acid, undecanoic acid, tridecanoic acid, pentadecanoic, heptadecanoic acid, nonadecanoic acid, eicosanoic acid, pentacosanoic acid, and the like. In addition to the acid starting materials one may also employ either the chlorides and/or esters of said acids as suitable starting materials which are reacted with amines which possess at least one hydrogen atom linked to the nitrogen, according to well-known methods.

The useful detergents which may be used in conjunction with the instant fabric softening composition include anionic detergents such as alkylbenzene-sulfonic acid and its salts, and compounds of the formula alkyl-phenyl-$SO_3$—M, wherein alkyl is an alkyl radical of $C_8$ to $C_{22}$ and preferably $C_{10}$ to $C_{18}$ and M is hydrogen or an alkali metal, which compounds comprise a wellknown class of anionic detergents and include sodium dodecylbenzene sulfonate, potassium dodecylbenzenesulfonate, sodium laurylbenzenesulfonate, and sodium cetylbenzenesulfonate. Others include paraffin sulfonates, alkyl sulfates, alcohol ether sulfates, olefin sulfonates and the alkylphenylethoxylate sulfates (e.g., sodium dinonylphenoxynonoethoxyethanol sulfate, sodium dodecylhexadecaethoxyethanol sulfate), and other equivalent water-soluble salts, particularly of the alkali metal series.

Among the above-noted alkylbenzene-sulfonic acid and salts thereof, the preferred compounds include those which are biodegradable and which are particularly characterized by a linear alkyl substituent of from $C_{10}$ to $C_{22}$ and preferably from $C_{12}$ to $C_{15}$. It is, of course, understood that the carbon chain length represents, in general, an average chain length since the method for producing such products usually employs alkylating reagents of mixed chain length. It is clear, however, that substantially pure olefins as well as alkylating compounds used in other techniques can and do give alkylated benzene sulfonates wherein the alkyl moiety is substantially (i.e., at least 99%) of one chain length, i.e., $C_{12}$, $C_{13}$, or $C_{14}$, or $C_{15}$. The linear alkyl benzene sulfonates are further characterized by the position of the benzene ring in the linear alkyl chain, with any of the position isomers (i.e. alpha to omega) being operable and contemplated.

The linear alkyl benzene sulfonates are generally and conveniently prepared by sulfonating the corresponding alkyl benzene hydrocarbons which in turn may be prepared by alkylating benzene with a linear alkyl halide, a 1-alkene or a linear primary or secondary alcohol. Pure isomers (of the 1-phenyl isomer) are prepared by reduction of the acylated benzene (alkyl phenyl ketone) using a modification of the Wolff-Keshner reaction. The 2-phenyl isomer is obtained from n-undecyl phenyl ketone and methyl magnesium bromide which forms the tertiary alcohol which is dehydrated to the alkene and then hydrogenated. The 5-phenyl isomer is obtained similarly from a n-heptyl phenyl ketone and n-butyl magnesium bromide. The other isomers are obtained in a similar manner from the appropriate n-alkyl phenyl ketone and n-alkyl magnesium bromide.

In addition to the benzene sulfonates one may also employ the lower alkyl ($C_1$ to $C_4$) analogs of benzene such as toluene, xylene, the trimethyl benzenes, ethyl benzene, isopropyl benzene and the like. The sulfonates are generally employed in the water soluble salt form which include as the cation, the alkali metals, ammonium, and lower amine and alkanolamine cations.

Examples of suitable linear alkyl benzene sulfonates are:

sodium n-decyl benzene sulfonate
sodium n-dodecyl benzene sulfonate
sodium n-tetradecyl benzene sulfonate
sodium n-pentadecyl benzene sulfonate
sodium n-hexadecyl benzene sulfonate

and the corresponding lower alkyl substituted homologues of benzene as well as the salts of the cations previously referred to. Mixtures of these sulfonates may, of course, also be used with mixtures which may include compounds wherein the linear alkyl chain is smaller or larger than indicated herein provided that the average chain length in the mixture conforms to the specific requirements of $C_{10}$ to $C_{22}$.

The linear paraffin sulfonates are also a well-known group of compounds and include water soluble salts (alkali metal, amine, alkanolamine, and ammonium) of:

1-decane sulfonic acid
1-dodecane sulfonic acid
1-tridecane sulfonic acid
1-tetradecane sulfonic acid
1-pentadecane sulfonic acid
1-hexadecane sulfonic acid

as well as the other position isomers of the sulfonic acid group.

In addition to the paraffin sulfonates illustrated above, others with the general range of $C_{10}$ to $C_{22}$ alkyls may be used, with the most preferable range being from $C_{12}$ to $C_{20}$.

The linear alkyl sulfates which are contemplated in this invention comprise the range of $C_{10}$ to $C_{20}$. Specific examples include sodium n-decyl sulfate; sodium n-dodecyl sulfate; sodium n-hexadecyl sulfate; sodium n-heptadecyl sulfate; sodium n-octadecyl sulfate; and the ethoxylated (1 to 100 moles ethylene oxide) derivatives; and, of course, the other water-soluble salt-forming cations mentioned above.

Included in the group of anionic detergents, which have been described above as suitable in the present invention, are the olefin sulfates, including long chain alkene sulfonates, long chain hydroxyalkane sulfonates, as well as disulfonates. These olefin sulfonate detergents may be prepared in known manner by the reaction of $SO_3$ with long chain olefins (of 8 to 25 carbon atoms and preferably of from 12 to 21 carbon atoms in chain length) of the formula

$RCH=CHR_1$

wherein R is alkyl and $R_1$ is alkyl or hydrogen, to produce a mixture of sultones and alkene sulfonic acids, which mixture is then treated to convert the sultones to sulfonates. While, generally, the olefins which are sulfonated with the sulfurtrioxide are comprised of a mixture of products having an average chain length within the carbon chain length specified above, and consequently will result in olefin sulfonates which are mixtures of varying chain length sulfonate products, it is equally clear that one may also employ pure, single chain length olefinic materials to produce thereby products which are essentially sulfonates of a single chain length. Still further, it is to be noted that among the group of olefin sulfonate materials, those which are most preferred are derived from α-olefins as distinct from those other olefinic compounds wherein the double bond occurs in other than the alpha position. Examples of suitable olefin sulfonates, which are merely illustrative of the general class, are sodium dodecenyl-1 sulfonate, sodium tetradecenyl-1 sulfonate, sodium hexadecenyl-1 sulfonate, and sodium octadecenyl-1 sulfonate.

Also useful in conjunction with the instant invention are nonionic detergents such as alkylaryl polyglycol detergents such as alkyl-phenol-ethylene oxide condensates (2–200 moles ethylene oxide), e.g., p-isooctyl phenol-polyethylene oxide (10 ethylene oxide units), long chain alcohol-ethylene oxide condensation products (2–200 moles ethylene oxide), e.g., dodecyl alcohol-polyethylene oxides having 4 to 16 ethylene oxide units per molecule, polyglycerol monolaurate, glycol dioleate, sorbitan monolaurate, sorbitan monostearate, sorbitan monopalmitate, sorbitan monooleate, sorbitan sesquioleate, the condensation products of ethylene oxide with sorbitan esters of long chain fatty acids (Tweens), alkylolamides, amine oxides, phosphine oxides, etc.

In addition to the anionic and nonionic detergents which may be employed in conjunction with the instant invention, cationic, ampholytic, and zwitterionic compounds have also been found to be useful. Representative of these compounds which may be employed in conjunction with the instant fabric softening compounds include quaternary ammonium compounds, e.g., distearyl dimethyl ammonium chloride, cetyl trimethyl ammonium bromide, sodium 3-dodecylamino propionate, fatty carbamides, etc.

The composition of the instant invention may also include, in addition to the fabric softening compounds and conventional anionic, catoinic, and nonionic detergent compositions, builders, brighteners, hydrotropes, germicides, soil suspending agents, anti-redeposition agents, antioxidants, bleaches, coloring materials (dyes and pigments), perfumes, water-soluble alcohols, foam boosters, non-detergent alkali metal benzene sulfonates, etc.

The builder is, generally, a water-soluble, inorganic salt which may be a neutral salt, e.g., sodium sulfate or an alkaline builder salt such as phosphates, silicates, bicarbonates, carbonates, citrates and borates. The preferred builders are those characterized as condensed phosphates such as polyphosphates and pyrophosphates and alkali citrates. Specific examples of alkaline salts are: tetrasodium pyrophosphate, pentasodium tripolyphosphate (either in phase I or phase II), sodium hexametaphosphate, and the corresponding potassium salts of these compounds, sodium and potassium silicates, e.g., sodium metasilicate and other silicates (e.g., $Na_2O$:1.6–3$SiO_2$), sodium carbonate, potassium carbonate, sodium and potassium bicarbonate, sodium citrate, and potassium citrate. Other salts may also be used where the compounds are water-soluble including the general class of alkali metals, alkaline earth metals, amine, alkanolamine, and ammonium salts. Other builders which are salts of organic acids may also be used, and in particular the water soluble (alkali metal, ammonium, substituted ammonium and amine) salts of aminopolycarboxylic acid such as:

ethylene diamine tetra-acetic acid
nitrilo triacetic acid
diethylene triamine penta-acetic acid
N-(2-hydroxyethyl)-ethylene diamine triacetic acid
2-hydroxyethyl-iminodiacetic acid
1,2-diaminocyclohexane diacetic acid,

and the like.

In addition to the above ingredients one may as previously delineated employ hydrotropes in connection with the compositions of the instant invention. The useful hydrotropes include such compounds as, sodium xylene sulfonate, potassium xylene sulfonate, sodium and potassium toluene sulfonates, and the position isomers thereof, and ethyl benzene sulfonate.

In addition to compositions comprising the novel higher alkyl amides softening agents of the instant invention in combination with detergent and conventional laundering additives, it is noted that said softening agents may in addition be formulated in suitable vehicles for addition to the laundering cycle without the concomitant addition of detergent materials. In connection therewith said higher alkyl amides may be solublized and/or dispersed by conventional techniques utilizing either alcohols, hydrotropic solutions, glycols, and the like. Furthermore it is noted that said softening agents may also be adsorbed onto suitable salts and/or other carriers for addition to the laundering cycle such as, for example, phosphates, borax, silicates, sodium sulfate, clays, starch, and the like.

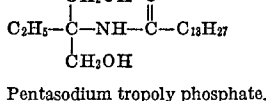
The amount of higher alkyl amide utilized in connection with detergent compositions is generally considered to be a relatively small proportion as compared to the weight of the active ingredients therein. It is noted however that one need only employ an effective amount of said higher alkyl amides which in fact produces the desired fabric softening action. Generally, the proportion by weight of detergent ingredients to additive should be from about 20:1 to about 1:1. It is preferred that said amide be present in an amount of from about 0.5% to about 15%, and preferably 2 to 10%, of the total ingredients present in the detergent on a weight basis. Expressed yet another way, it is desirable to have about 0.003% amide present in the wash water.

The composition of the instant invention may be employed in either particulate, liquid, tablet, or any other conventional form. Moreover, as noted above the novel higher alkyl amide as disclosed herein may be employed as fabric softeners by being applied to textile materials during the washing process without the concomitant addition of detergent materials thereto.

The instant invention will now be illustrated by the following more detailed examples thereof. It is noted however that the instant invention is not deemed as being limited thereto.

## EXAMPLE I

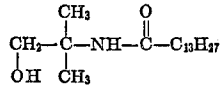
The following detergent composition is prepared:

| | Percent |
|---|---|
| Sodium linear tridecyl benzene sulfonate. | 20 |
|  | 10 |
| Pentasodium tropoly phosphate | 40 |
| Sodium carboxy methyl cellulose | 1 |
| A stilbene brightner | 0.5 |
| A triazol brightner | 0.2 |
| Sodium sulfate | 18.3 |
| Water | 10 |

The above composition is formulated so as to provide a 50% solids slurry in water. The slurry is then heated to approximately 180° F. and subsequently spray-dried so as to provide a powder therefrom. 100 grams of said powder are then utilized in the laundering of terry cloth towels during which said towels are placed through a normal sequence of a wash cycle, a spin, a rinse, and a spin-dry cycle. Subsequent to the final spin cycle the towels are then dried and rated as to softness on a scale of 1–10. A rating of 1 corresponds to the results obtained by the use of the above composition in the absence of the subject amide compound. Such a rating indicates that the towels were in fact quite harsh. A rating of 10 is considered excellent insofar as softness and fluffiness are concerned while a rating of 5 generally cannot be distinguished by the layman from the rating of 1. Ratings of 8 to 10 are noteable and considered outstanding with regard to the softness of the fabric. In the instant examples the use of the subject amide compound has been found to produce towels having a softness rating of between 8 and 10 on the above noted scale.

## EXAMPLE II

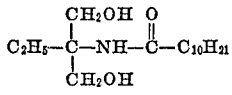
The procedure of Example I is repeated substituting for the amide employed therein the following amide:



As a result of the washing process the towels utilized therein are found to have a softness rating of 9 on the scale defined in Example I.

## EXAMPLE III

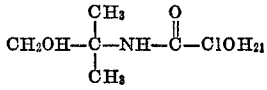
A heavy-duty liquid detergent is formulated as follows:

| | Percent |
|---|---|
| Linear dodecyl benzene sulfonate | 10 |
| Sodium cumene sulfonate | 10 |
|  | 5 |
| Potassium pyrophosphate | 15 |
| Water, quantity sufficient to make 100%. | |

The above formulation when mixed results in a liquid composition which when employed in the usual manner in laundering operations utilizing terry cloth towels results in said towels having a softness rating of 10.

## EXAMPLE IV

The procedure of Example III is repeated substituting for the amide utilized therein the following amide.



## EXAMPLE V

Example III is repeated with the exception that the potassium pyrophosphate is replaced by 20% sodium nitrilo tri-acetate. The results obtained therefrom are excellent insofar as the softeness rating is concerned.

## EXAMPLE VI

The procedure of Example IV is repeated with the exception that part of the pyrophosphate is replaced by sodium nitrilo tri-acetate so as to provide 12.5% additives of said pyrophosphate and 7.5% additives of said nitrilo tri-acetate. The terry cloth towels which are washed with the product are found to have a softness rating of 10.

## EXAMPLE VII

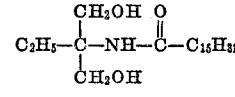
A detergent composition is formulated as follows: Example III is again repeated except that the following materials are substituted for the sodium cumene sulfonate utilized therein:

(A) 5% sodium toluene sulfonate
(B) 7% sodium toluene sulfonate
(C) 3% sodium cumene sulfonate
(D) 6% sodium cumene sulfonate
(E) 10% potassium xylene sulfonate
(F) 5% potassium xylene sulfonate.

In each instance the results obtained from the use of the compositions as formulated are found to be outstanding insofar as the softness of the resulting cleansed towels is concerned.

## EXAMPLE VIII

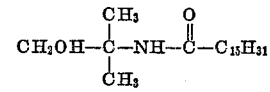
A detergent composition is prepared comprising:

| | Percent |
|---|---|
| Linear dodecyl benzene sulfonate | 10 |
| Tallow alcohol sulfate | 10 |
| Sodium salt of nitrilo tri-acetate | 30 |
| Carboxy methyl cellulose | 1 |
| Sodium sulfate | 29.3 |
|  | 10 |
| Stilbene brightener | 0.5 |
| Triazol brightener | 0.2 |
| Water | 10 |

The above composition is prepared as in Example 1 and 100 grams of the product are then utilized in washing a load of terry cloth towels. The towels which results are tested and found to have a softness rating of 10.

## EXAMPLE IX

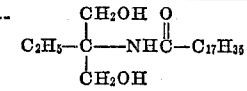
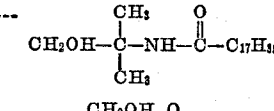
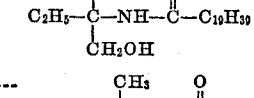
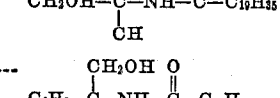
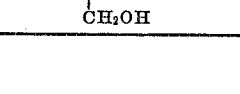
The composition of Example VIII is again formulated substituting for the amide utilized therein the following amide:



The towels which results are tested and found to have a softness rating of 9.

## EXAMPLE X

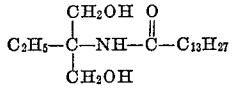
The composition of Example VIII is again formulated substituting the following amide compounds in the amount indicated for the amide utilized therein:

| | | Percent |
|---|---|---|
| (a) |  | 5 |
| (b) |  | 8 |
| (c) |  | 12 |
| (d) |  | 15 |
| (e) |  | 10 |

The amount of water and sodium sulfate are adjusted so as to obtain a suitable detergent product. The towels washed with the above products are all tested and found to be extremely soft and have ratings of between 8 and 10.

## EXAMPLE XI

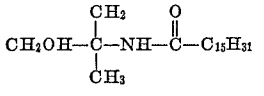
In this and the following examples there are illustrated compositions containing the novel amide softeners of the instant invention in combination with other ingredients which formulations may be employed either in connection with the wash cycle of the conventional laundering operation or in the rinse cycle of such an operation inasmuch as no detergent material is employed in such formulations. A composition is prepared comprising:

| | Percent |
|---|---|
|  | 30 |
| Sodium tripolyphosphate | 69.9 |
| Perfume | 0.1 |

The subject amide is melted and blended with the tripolyphosphate material subsequent to which the mixture is cooled so as to yield a free flowing granular mixture. The powder is then used in conjunction with a conventional powder detergent formulation in a washing machine in an amount of 2 ounces of said powder in combination with ¾ cup of powder detergent. Towels laundered with said composition are found to have a softness rating of 10.

## EXAMPLE XII

A softening composition is formulated comprising:

| | Percent |
|---|---|
|  | 20 |
| Isopropanol | 40 |
| Water | 40 |

The above ingredients are blended and stirred with moderate heat to produce a liquid composition. Two ounces of said liquid are utilized in the rinse cycle of a conventional laundering process in connection with terry cloth towels as a result of which said towels are found to have a softness rating of 10.

In connection with the subject compositions, it is noted that in built detergents, the organic cleaning agent, i.e., the anionic, nonionic, etc., compound may comprise from about 5% to upwards of 75% by weight of the total formulation and usually varies from 5% to 35% by weight. In liquid compositions, the amount of water used is relatively high in order to obtain pourable and generally stable systems. In these, total solids may vary from a few percent, i.e., 2–10%, upwards of about 50–60% with the organic detergent present, usually in amounts from about 2–25% and preferably 5–15%. In solid formulation, i.e., powder, etc., total solids may run as high as 90% or more and here the organic detergent may be used at the high concentrations above indicated, but usually the range is 5–25%. The second major component of the "built" or heavy duty liquids, and this is true of the solid (i.e., powdered or tableted types) formulations also, is the alkaline builder salt, and the amount thereof again may vary considerably, e.g., from 5–75% of the total composition. In solid formulations larger percentages are generally employed, e.g., 15–50%, whereas in the liquid types the salts are used in lesser amounts, e.g., 5–25% by weight of the total composition.

What is claimed is:

1. A fabric softening composition consisting essentially of from an effective fabric softening amount to about 15% of a higher $C_{10}$–$C_{26}$ alkyl amide of a compound selected from a group consisting of 2-amino-2-methyl-1-propanol, and 2-amino-2-ethyl-1,3-propanediol, and the balance being substantially an anionic detergent.

2. The composition of claim 1 wherein said higher alkyl amide contains from about 10 to about 17 carbon atoms in the alkyl group.

3. The composition of claim 1 further containing a stilbene or triazol brightener.

4. The composition of claim 1 wherein said detergent is selected from the group consisting of compounds of the formula alkyl-phenyl-$SO_3 \cdot M$ wherein alkyl is an alkyl radical of $C_8$ to $C_{22}$, M is hydrogen or alkali metal, paraffin sulfonates, alkyl sulfates and ethoxylated alkyl sulfate containing from 1 to 100 moles ethylene oxide, olefin sulfonates and alkylphenylethoxylate sulfates.

5. The composition of claim 4 wherein the alkyl-phenyl-$SO_3 \cdot M$ detergent is linear dodecyl benzene sulfonate.

6. The composition of claim 4 further containing from about 5–75% of a water soluble builder salt.

7. The composition of claim 6 wherein said builder salt is a condensed alkali metal phosphate.

8. The composition of claim 6 wherein said builder is pentasodium tripolyphosphate, potassium pyrophosphate, sodium tripolyphosphate or the sodium salt of nitrilo triacetate.

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