

1

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BUFFING COMPOSITIONS

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This invention relates to buffing compositions and is directed particularly to the provision of an improved buffing composition which is used in the form of a water-base liquid. The new buffing composition consists essentially of a grease in which a non-ionic, surface-active emulsifying agent and particles of a finely divided abrasive are intimately dispersed. The new composition may be prepared and shipped in liquid form. Also, the new composition may be advantageously prepared and shipped in anhydrous form. It is then made ready for use in liquid form by stirring with warm water, in which it emulsifies readily. In the resultant emulsion, the water forms the continuous phase, and dispersed therein are emulsified particles of the grease in which the particles of abrasive are substantially completely enveloped.

It has been customary heretofore to prepare buffing compounds by intimately mixing abrasive particles with a grease vehicle (grease-type buffing compositions) or with a glue-base vehicle (greaseless compositions). Both types of buffing compositions are plastic solids at normal temperatures and are used by pressing the solid against a rotating buffing wheel, whereby the wheel is charged with the composition. Such compositions are inherently dirty and somewhat inconvenient to use, although they have been the standard buffing compositions commercially employed for polishing and like operations.

Liquid buffing compositions, composed essentially of a liquid vehicle (e. g. kerosene or water) in which a grease is dissolved or dispersed and in which the abrasive particles are suspended, have been proposed. Such liquid compositions are somewhat more convenient to use than the solid buffing compositions, but suffer from serious drawbacks. For example, liquid compositions using a kerosene or other inflammable organic vehicle introduces a significant fire hazard in buffing operations in which they are employed. Heretofore known liquid compositions employing an aqueous vehicle have lacked adequate stability, particularly with reference to maintaining the abrasive particles suspended in the vehicle. With both of these heretofore known types of liquid compositions, adherence of the abrasive particles to a rapidly rotating buffing wheel has been poor, with consequent diminished effectiveness of the composition for buffing and polishing purposes.

We have discovered that if a grease-base buffing composition comprising a grease and particles of a finely divided abrasive is prepared in substantially anhydrous form, and if an effective amount of non-ionic, surface-active emulsifying agent is incorporated therein, the resulting composition disperses readily in water to form a stable emulsion in which the abrasive particles are substantially completely enveloped in the emulsified grease particles.

Based on the discovery, the invention provides an improved buffing composition consisting essentially of 10% to 60%, and preferably from 20% to 45%, by weight of a grease having intimately dispersed therein from 1% to

2

15% by weight of a non-ionic, surface-active emulsifying agent and from 30% to 80%, and preferably from 50% to 75%, by weight of a finely divided abrasive. (All percentages given herein, unless otherwise indicated, are on the basis of the anhydrous composition.) Such composition is characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase. In the emulsified form, the new buffing composition is a liquid emulsion consisting essentially of an aqueous continuous phase having dispersed therein emulsified particles of grease in which particles of finely divided abrasive are substantially completely enveloped.

By the term "grease" we mean to include any fat or organic wax which may be solid or liquid at room temperature, insoluble in water and greasy or waxy in texture. The chemical composition or nature of the fat or wax is of no importance to the present invention. By way of example (but not by way of limitation, for any fat or wax having the above stated physical properties may be used) we mention the following commonly available greases that may be applied in accordance with the invention: Fatty acids such as stearic acid, palmitic acid, myristic acid, lauric acid, and oleic acid; glycerides of the fatty acids such as mono-, di-, and tri-glycerides of lauric, palmitic, stearic and oleic acids; such commercial fats and fatty acids as hydrogenated fish oil, hydrogenated tall oil, tallow, and wool fat; and such natural waxes as beeswax, carnauba wax and Chinese insect wax. Of these we prefer to use, and have had most satisfactory results using, a fatty acid grease, by which term we mean a grease composed wholly or essentially of a fatty acid or fatty acid glyceride or a mixture thereof. It is not necessary that the grease be composed of any one fat or wax, but rather, it may be, and in practice most often is, a mixture of two or more such compounds. While the grease may, as stated above, constitute from 10% to 60% by weight (on the dry basis) of the composition, we have in general found it desirable to use the grease in the narrower range of 20% to 40% by weight (on the dry basis) of the composition.

Any non-ionic, surface-active emulsifying agent may be employed in preparing the new composition. By way of example, we have employed successfully various non-ionic condensation products of alkylene oxides and fatty acids containing from 12 to 18 carbon atoms, condensation products of alkylene oxides and fatty alcohols containing from 12 to 18 carbon atoms, condensation products of alkylene oxides and rosin acids, condensation products of alkylene oxides and partial esters of hexitol anhydrides and fatty acids containing 12 to 18 carbon atoms, condensation products of alkylene oxides and amide derivatives of hydrogenated tallow fatty acids, glycol esters of fatty acids containing 12 to 18 carbon atoms, partial esters of hexitol anhydrides and fatty acids containing 12 to 18 carbon atoms, glycol esters of rosin acids, partial esters of hexitol anhydrides and rosin acids, condensation products of alkylene oxides and alkyl phenols, condensation products of alkylolamines and fatty acids containing 12 to 18 carbon atoms, and condensation products of polyoxypropylene and ethylene oxide. Mixtures of these emulsifying agents are employed as well as the emulsifying agents singly. All of these surface-active emulsifying agents are of the non-gelling type.

As examples of the above-described classes of emulsifying agents, we have employed "Emulphor O," a product of I. G. Farben Industries, which is a condensation product of oleyl alcohol with ethylene oxide; "Tween 60," a product of the Atlas Powder Company, which is polyoxyethylene sorbitan monostearate; "Tween 40," a product of the Atlas Powder Company, which is poly-

oxyethylene sorbitan monopalmitate; "Tween 20," a product of the Atlas Powder Company, which is polyoxyethylene sorbitan monolaurate; "Ethomid HT/60," a product of Armour Company, which is a condensation product of ethylene oxide and an amide derived from hydrogenated tallow fatty acids; "Polyethylene Glycol 600 Distearate," a product of Glyco Products Company; "Span 40," a product of Atlas Powder Company, which is sorbitan monopalmitate; "Span 20," a product of Atlas Powder Company, which is sorbitan monolaurate; "Triton X-100," a product of Rohm & Haas, which is a condensation product of an alkyl phenol with ethylene oxide; "Neutronyx 600," a product of Onyx Oil & Chemical Company, which is an alkyl phenol polyglycol ether; "Alrosol," a product of Alrose Chemical Company, which is a condensation product of fatty acids and diethanolamine; and "Pluronic L62," a product of Wyandotte Chemical Corporation, which is a condensation product of ethylene oxide and polyoxypropylene. Mixtures of two emulsifying agents from this list have been used as set forth in the examples below. While it is possible to select one emulsifying agent to produce a suitable buffing composition, often it is advisable to use two emulsifiers from the same class or to use two emulsifiers, each selected from a different class. Commercially these emulsifiers are often made to be predominately water soluble or predominately oil soluble. In order to satisfactorily emulsify our grease materials, we find it advisable to get a balance between the hydrophilic and hydrophobic properties of an emulsifying agent. While numerous of these materials have the proper balance in themselves, it is often simpler to obtain the balance by the proper proportioning of two emulsifiers giving a much wider selection which is advantageous both economically and from the standpoint of producing the most satisfactory liquid buffing compounds.

Within the range previously stated, we find it advantageous to use the emulsifying agent in an amount from 2½% to 8% by weight of the composition (on the dry basis). While any non-gelling, non-ionic surface-active emulsifying agent may be employed successfully in making the new composition, we have obtained particularly satisfactory results using together (one) a non-ionic hexitol ester of a fatty acid containing from 12 to 18 carbon atoms, e. g., sorbitan monopalmitate, in an amount ranging from 0.5% to 5% by weight of the composition and advantageously in an amount from 1% to 3% by weight thereof, and (two) a non-ionic polyoxyethylene hexitol ester of a fatty acid containing from 12 to 18 carbon atoms, e. g., polyoxyethylene sorbitan monopalmitate, in an amount ranging from 0.5% to 10%, and most advantageously from 2% to 5%, by weight of the composition.

Any finely divided abrasive may be used in preparing the buffing composition, including all of the abrasives heretofore used in buffing and like compounds such, for example, as rouge (ferric oxide), tripoli, emery, garnet, silicon carbide, aluminum oxide, chromic oxide, silica, etc.

The grease, the emulsifying agent, and the abrasive constitute the essential ingredients of the new composition. It is often advantageous, however, to incorporate various other materials in it, such as one or more modifying agents for the grease. By way of example, any of the animal, vegetable or mineral oils or pitches may be used as modifying agents for the fatty acid grease, including fish oils (e. g. menhaden oil), cottonseed oil, soy bean oil, oleic acid, tall oil, petrolatum, petroleum oils, soy bean pitch, stearin pitch, etc. The purpose of such modifying agents is to produce a grease-base vehicle having optimum hardness, stickiness, and other physical properties for the particular use to which the composition is to be put.

In addition, it is advantageous to incorporate a bactericidal or fungicidal agent and an anti-foaming agent in

the composition. The bactericidal or fungicidal agent is especially important in compositions in which a fatty acid grease is employed. Sometimes, too, it is of advantage to incorporate from 0.1% to 6% by weight of bentonite clay in the grease composition to facilitate dispersion of the abrasive.

The composition is prepared by heating the fatty acid grease to a temperature at which it is molten, and then stirring into it the emulsifying agent and the abrasive so that the latter two ingredients are thoroughly and intimately distributed throughout the grease. At the same time, such other ingredients as the grease modifying agent, the bactericide, the anti-foaming agent, the bentonite if such be used, etc., are also stirred into the molten liquid and thereby are intimately distributed throughout its mass. Water may then be added, with strong agitation. On subsequent cooling a smooth, stable, free-flowing emulsion is formed with the abrasive permanently suspended. This emulsion may be sold and shipped in this form. Alternatively, the mixture of ingredients, prior to addition of water, while still liquid, may be cast into bars or other suitable shapes and allowed to cool to room temperature, whereupon it becomes solid. It may be distributed in bar or slab form, or may be granulated or formed into pellets prior to distribution or use. At the point of use the bar is mixed with an appropriate quantity of water (preferably warmed to 180° F.) and stirring to achieve a liquid emulsion having an aqueous continuous phase and in which the grease and abrasive together form the dispersed phase. In lieu of preparing the composition in the molten state, it is sometimes possible to obtain satisfactory results by intimately mixing the solid ingredients in comminuted form and then, if desired, compressing into pellets. The following are examples of the preparation of buffing compositions according to the invention:

Example 1

	Percent
Hydrogenated fish fatty acid	7.6
Tall oil	3.4
Petrolatum	4.7
Polyoxyethylene sorbitan monostearate (Atlas G9096H)	3.2
Once ground rose tripoli	32.0
Water	52.0
Preservative	0.1

The fatty acid, tall oil, petrolatum and preservative were melted together with the emulsifying agent and the tripoli was mixed in while the temperature of the mass was raised to 160° F. and maintained there. The required water was heated to 180° F. and added slowly to the mass while mixing with a high speed agitator. After the water addition, the mixture was cooled to 70° F. while being continually agitated. The resulting composition was a homogeneous material which flowed and was readily sprayable onto a buffing wheel. The tripoli was in a condition in which it was impregnated with the grease which, in turn, was emulsified in the water. The whole mass was a stable suspension. The viscosity at 70° F. as determined with a Gardner mobilometer was 30 seconds with an additional 200 gram weight.

In case it is desired to ship or store the compound in ingot or bar form for subsequent conversion to a liquid, the above materials minus the water may be mixed at a temperature of 160° F. as indicated above and then poured into molds and allowed to solidify. In such form, it can be stored for an indefinite period. Upon subsequent reheating to 160° F., the addition of water at 180° F. as indicated above will form the liquid emulsion.

Example 2

	Percent
Double pressed stearic acid	6.5
Stearine pitch	0.9
Tallow	4.5

5

Condensation product of ethylene oxide and hydrogenated tallow amide (Armour Ethomid HT/60) -----

Once ground rose tripoli -----	3.0
Water -----	33.0
Preservative -----	52.0
-----	0.1

This material was mixed in a manner similar to Example 1. The resulting emulsified mixture had a viscosity of 15 seconds with an added 200 grams and was in every way stable and made a very satisfactory buffing liquid.

Example 3

	Percent
Hydrogenated tallow fatty acid titre, 54° C. -----	5.0
Hydrogenated fish oil glyceride titre, 42° C. -----	3.1
Dark green petrolatum, M. P. 120/130° F. -----	3.9
Polyethylene glycol 600 distearate (Glyco Products Co.) -----	3.4
#240 and finer fused aluminum oxide -----	51.0
Water -----	33.4
Preservative -----	0.2

The buffing emulsion was prepared as in Example 1 and gave a flowable material having a viscosity of 15 seconds with an additional 400 gram weight. This viscosity is in the range preferred for spraying compounds having a fused aluminum oxide type of abrasive.

Example 4

	Percent
Double pressed stearic acid -----	6.4
Tallow -----	4.4
"Triton X-100," a condensation product of an alkyl phenol with ethylene oxide -----	2.6
Unfused alumina, 240 mesh and finer (A coarse #1) -----	35.8
Preservative -----	0.2
Water -----	50.6

The buffing composition was prepared as in Example 1. The emulsion has a viscosity of 20 seconds with an additional 20 gram weight.

Example 5

	Percent
Single pressed stearic acid -----	4.5
Oleic acid -----	3.5
Amber petrolatum -----	3.1
"Alrosol" a condensation product of fatty acids and diethanolamine -----	2.8
Double ground rose tripoli -----	28.0
Preservative -----	0.1
Water -----	58.0

The acids, petrolatum, preservative and emulsifying agent were heated and melted together and the temperature was raised to 160° F. Maintaining the temperature, the tripoli was added and mixed to uniform consistency. Water was added, at a temperature of 180° F. while the mixture was strongly agitated. A stiff paste was formed on addition of the water. On cooling, the paste persisted until the temperature reached 110° F. At this point the mixture began to thin. On continued cooling, the mixture became a smooth, stable, free-flowing emulsion with the abrasive permanently suspended. The viscosity at 70° F. was 10 seconds with an added 200 gram weight. This product was found to be an excellent material for cutting down non-ferrous metals, such as brass, etc.

Example 6

	Percent
Hydrogenated fish fatty acid -----	8.2
Tall oil -----	0.4
Petrolatum -----	5.1
"Pluronic L62," the condensation product of polyoxypropylene and ethylene oxide -----	3.4
Once ground rose tripoli -----	34.65
Water -----	48.0
Preservative -----	0.2
Trisodium phosphate -----	0.05

6

The fatty acid, tall oil, petrolatum, preservative and emulsifying agent were heated together to 140° F. Maintaining the 140° F. temperature, the abrasive was added and thoroughly blended. 90% of the water was then heated to 150° F. and added to the mixture with vigorous agitation. At this temperature the water was only mechanically mixed with the rest of the composition. This condition continued as the temperature was reduced until a temperature of 100° F. was reached at which point the mass emulsified forming a very heavy viscous mixture. At this temperature the trisodium phosphate dissolved in the balance of water was added, thinning the emulsion to proper viscosity to flow. After cooling this emulsion was sprayable and had a viscosity of 15 seconds with an added 200 gram weight.

Example 7

	Percent
Hydrogenated fish fatty acid -----	5.3
Tall oil -----	2.3
Petrolatum -----	2.2
"Pluronic L62," the condensation product of ethylene oxide and polyoxypropylene -----	0.8
"Tween 60," polyoxyethylene sorbitan monostearate -----	1.6
Amorphous silica, 240 mesh and finer -----	39.8
Preservative -----	0.2
Water -----	47.8

The buffing composition was prepared as in Example 1. This buffing composition illustrates the use of two emulsifiers of different classes to form a suitable buffing composition.

Example 8

	Percent
Polyoxyethylene sorbitan monopalmitate -----	1.7
Sorbitan monopalmitate -----	0.9
Hydrogenated fish fatty acid -----	6.8
Oleic acid -----	6.8
Double ground rose tripoli -----	45.6
Preservative -----	0.2
Water -----	38.0

The buffing composition was prepared as in Example 1. The viscosity of the final product was 30 seconds with an added 200 gram weight. This composition is a further example of two emulsifiers combined in a single buffing composition.

The following examples illustrate the preparation of our buffing compositions in solid form. They are prepared according to Example 1 except that they were poured into molds, prior to the water addition, and allowed to solidify. Before use they are melted again and heated to 160° F. and water is then added as in Example 1.

Example 9

	Percent
Polyoxyethylene sorbitan monopalmitate -----	4.52
Sorbitan monopalmitate -----	2.26
Hydrogenated fish oil fatty acids -----	33.88
Parachlorometacresol (bactericide) -----	0.61
Anti-foaming agent -----	0.03
Tripoli -----	58.70

The buffing composition was prepared as in Example 1.

Example 10

	Percent
Polyoxyethylene sorbitan monopalmitate -----	3.82
Sorbitan monopalmitate -----	1.91
Hydrogenated fish oil fatty acids -----	20.49
Tall oil -----	10.45
Parachlorometacresol (bactericide) -----	0.47
Anti-foaming agent -----	0.02
Chromic oxide -----	6.24
Levigated alumina -----	56.80

The buffing composition was prepared as in Example 1.

Example 11

	Percent
Polyoxyethylene sorbitan monopalmitate	4.32
Sorbitan monopalmitate	2.16
Hydrogenated fish oil fatty acids	24.24
Soya bean pitch	12.11
Parachlorometacresol (bactericide)	0.59
Anti-foaming agent	0.02
Tripoli	56.56

The buffing composition was prepared as in Example 1.

Example 12

	Percent
Polyoxyethylene sorbitan monopalmitate	2.7
Sorbitan monopalmitate	1.35
Hydrogenated fish oil fatty acids	12.13
Microcrystalline wax	12.13
Polychlorometacresol (bactericide)	0.47
Anti-foaming agent	0.02
Quartz	70.82
Bentonite	0.38

The buffing composition was prepared as in Example 1.

In the buffing emulsions prepared according to the above examples, either prepared directly as the aqueous emulsion, or formed as a solid bar and later mixed with water to form an emulsion, the abrasive particles are grease-coated or substantially completely enveloped in the dispersed particles of the grease base, and do not tend to settle out separately. The emulsion therefore is highly stable over prolonged periods of time, both in respect to the grease and in respect to the abrasive.

The amount of water used in making the emulsion depends on how viscous an emulsion is desired; in general an amount of water (by weight) ranging from one-half to twice the weight of the anhydrous buffing composition gives a most satisfactory liquid product.

As stated previously, bentonite clay may be incorporated directly in the grease-base composition to aid in dispersing the abrasive particles, but often the bentonite functions most effectively as a dispersing agent if it is incorporated directly in the aqueous phase of the emulsion, separately from the grease-base composition. This may be accomplished by starting the emulsion with about 10% of the total amount of water to be used, and then adding 0.1% to 6% (and most advantageously from 0.25% to 0.75%), by weight of the dry solids, of bentonite clay. Thereafter, with further stirring, the balance of the water is added. With the bentonite then incorporated in the aqueous phase of the emulsion, it thickens it and helps to disperse the grease-coated abrasive particles.

The emulsion is used by dripping, spraying, painting or swabbing it onto a rotating buffing wheel, or by applying it (similarly or otherwise) directly to the workpiece to be buffed or polished. Because each of the abrasive particles is substantially enveloped in or coated with the grease component of the composition, the amount of abrasive that is thrown clear of the wheel or workpiece before it has performed the buffing or polishing function is small. In this respect, the new buffing composition is very much superior to compositions in which the grease component and the abrasive are separately dispersed in a liquid vehicle. The use of the new composition does not entail the fire hazard that accompanies the use of a liquid composition having an inflammable vehicle such as kerosene. It has the further advantage that if it splashes on the work it is easily washed off with soft or hard water much more easily, of course, than conventional grease-base buffing compounds, and is even more easily washed off than compositions having a saponified fatty acid base.

The new buffing composition may be made with greases having both substantially higher and substantially lower melting or softening temperatures than have here-

tofore been used successfully in either liquid-type buffing compositions or in the buffing compound bars that are used in solid form. Indeed, the great latitude in the choice of greases over a wide range of melting or softening temperatures which is possible in making the new buffing compositions is one of the outstanding advantages of the invention. Since the new composition may be prepared initially in substantially anhydrous form, its storage and transportation then entails less expense than in the case of compositions prepared initially as liquids. It is stable indefinitely in the solid substantially anhydrous form, and is very easily converted to a liquid emulsion by the user, who requires no special apparatus for such purpose. In the liquid emulsion, either prepared directly, or formed later from solid bars, it is stable over long periods of time. The new buffing composition thus displays the versatility of being commercially suitable to preparation directly in the liquid emulsion form or in a solid type bar form for later conversion to emulsion form at the time of use.

This application is a continuation-in-part of our application Serial No. 152,754, filed March 29, 1950, and now abandoned.

We claim:

1. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, and from 30% to 80% by weight of a finely-divided abrasive, said grease having intimately dispersed therein from 1% to 15% by weight of a non-ionic surface-active emulsifying agent selected from the group consisting of condensation products of alkylene oxides and fatty acids containing 12 to 18 carbon atoms, condensation products of alkylene oxides and fatty alcohols containing 12 to 18 carbon atoms, condensation products of alkylene oxides and rosin acids, condensation products of alkylene oxides and partial esters of hexitol anhydrides and fatty acids containing 12 to 18 carbon atoms, condensation products of alkylene oxides and amides derivatives of hydrogenated tallow fatty acids, condensation products of alkylene oxides and alkyl phenols, condensation products of alkylolamines and fatty acids containing 12 to 18 carbon atoms, condensation products of polyoxypropylene and ethylene oxide, glycol esters of fatty acids containing 12 to 18 carbon atoms, partial esters of hexitol anhydrides and fatty acids containing 12 to 18 carbon atoms, glycol esters of rosin acids, and partial esters of hexitol anhydrides and rosin acids, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

2. A liquid buffing composition comprising an aqueous emulsion of a mixture consisting essentially of from 30% to 80% by weight of a finely-divided abrasive, 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 1% to 15% by weight of a non-ionic surface-active emulsifying agent selected from the group consisting of condensation products of alkylene oxides and fatty acids containing 12 to 18 carbon atoms, condensation products of alkylene oxides and fatty alcohols containing 12 to 18 carbon atoms, condensation products of alkylene oxides and rosin acids, condensation products of alkylene oxides and partial esters of hexitol anhydrides and fatty acids containing 12 to 18 carbon atoms, condensation products of alkylene oxides and amide derivatives of hydrogenated tallow fatty acids, condensation products of alkylene oxides and alkyl phenols, condensation products of alkylolamines and fatty acids containing 12 to 18 carbon atoms, condensation products of polyoxypropylene and ethylene oxide, glycol esters of fatty acids containing 12 to 18 carbon atoms, partial esters of hexitol anhydrides and fatty acids containing 12 to 18

carbon atoms, glycol esters of rosin acids, and partial esters of hexitol anhydrides and rosin acids, said liquid composition having an aqueous continuous phase in which emulsified particles of the grease having the abrasive particles substantially completely enveloped therein are dispersed.

3. A liquid buffing composition comprising an aqueous emulsion of a mixture consisting essentially of 20% to 45% by weight of a fatty acid grease having intimately dispersed therein from 50% to 75% by weight of a finely-divided abrasive and from 2½% to 8% by weight of a non-ionic surface-active emulsifying agent selected from the group consisting of condensation products of alkylene oxides and fatty acids containing 12 to 18 carbon atoms, condensation products of alkylene oxides and fatty alcohols containing 12 to 18 carbon atoms, condensation products of alkylene oxides and rosin acids, condensation products of alkylene oxides and partial esters of hexitol anhydrides and fatty acids containing 12 to 18 carbon atoms, condensation products of alkylene oxides and amide derivatives of hydrogenated tallow fatty acids, condensation products of alkylene oxides and alkyl phenols, condensation products, of alkylolamines and fatty acids containing 12 to 18 carbon atoms, condensation products of polyoxypropylene and ethylene oxide, glycol esters of fatty acids containing 12 to 18 carbon atoms, partial esters of hexitol anhydrides and fatty acids containing 12 to 18 carbon atoms, glycol esters of rosin acids, and partial esters of hexitol anhydrides and rosin acids, there being from 0.2% to 0.75% of bentonite clay by weight of said mixture dispersed in said emulsion, said liquid composition having an aqueous continuous phase in which particles of bentonite and emulsified particles of grease having the abrasive particles substantially completely enveloped therein are separately dispersed.

4. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 0.5% to 5% by weight of a non-ionic hexitol ester of a fatty acid containing from 12 to 18 carbon atoms, from 0.5% to 10% of a non-ionic polyoxyethylene hexitol ester of a fatty acid containing from 12 to 18 carbon atoms and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

5. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 0.5% to 5% of sorbitan monopalmitate, from 0.5% to 10% of polyoxyethylene sorbitan monopalmitate, and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

6. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 0.5% to 5% of sorbitan monolaurate, from 0.5% to 10% of polyoxyethylene sorbitan monolaurate, and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

7. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 1% to 15% by weight of the condensation product of ethylene oxide and polyoxypropylene and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

8. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 1% to 15% by weight of a condensation product of an alkylene oxide and a partial ester of a hexitol anhydride and a fatty acid containing 12 to 18 carbon atoms, and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

9. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 1% to 15% of polyoxyethylene sorbitan monostearate and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

10. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 1% to 15% of a partial ester of a hexitol anhydride and a fatty acid containing 12 to 18 carbon atoms, and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

11. A buffing composition consisting essentially of 10% to 60% by weight of a grease selected from the group consisting of higher fatty acids, their glycerides, and their ester waxes, said grease having intimately dispersed therein from 1% to 15% by weight of sorbitan monopalmitate and from 30% to 80% by weight of a finely-divided abrasive, said composition being characterized by emulsifying readily in water to form an emulsion in which the abrasive particles are grease-coated and stably dispersed in the aqueous phase.

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