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3,142,622

SOLUBILIZED SHELLAC AEROSOL HAIR SPRAY
 Clarence Clapp, Montebello, Calif., assignor to Western
 Filling Corporation, Los Angeles, Calif., a corporation
 of California
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 6 Claims. (Cl. 167-87)

This invention has to do generally with improved aerosol compositions in the category of shellac-containing formulations usable for such purposes as hair sprays and the like. More particularly, the invention is concerned with essentially anhydrous shellac-containing aerosols, and with accomplishment of the objective of achieving compatibility of the shellac, alcohol and liquefied gaseous propellant in the packaged state, and rendering the shellac water soluble in an applied state.

Preliminarily it may be observed that the invention is primarily concerned with the use of shellacs which are refined by wax removal, and ordinarily also bleaching and decolorizing, to obtain the generally known and widely used quality of shellac employed in such aerosol products as hair sprays, and of which shellac available under the trade name "Angelo Super Blonde" is typical. Ethyl alcohol is a desirable solvent for such shellacs, and the packaged system may employ any of various propellants such as trichloromonofluoromethane, methyl chloroform, methylene chloride, vinyl chloride, dichlorodifluoromethane, dichlorotetrafluoroethane, saturated hydrocarbons such as propane, isobutane or normal butane, all of which are non-solvents for the shellac.

As mentioned, the invention is concerned with substantially anhydrous packaged aerosol compositions of the character indicated, which by reason of their anhydrous state, present a difficult problem in achieving and maintaining non-precipitating compatibility or solubility of the shellac with the alcohol and liquefied propellant, while having the shellac ultimately so conditioned that in its applied state, as to the hair, it will be readily water soluble. I have determined that such compatibility and properties of the shellac may be achieved by the use of a solubilizing agent which, as contrasted with a large number of others tested and rejected, is found to be highly selective in its efficacy for the stated purpose.

I have successfully solubilized the shellac in the presence of both the alcohol and propellant, by combining with the shellac 2-amino-2-methyl-1-propanol in an amount sufficient to render the shellac non-precipitating in the container, and, as indicated, water soluble after use application. Such combination may be effected simply by mixing together the shellac and the 2-amino-2-methyl-1-propanol in alcohol.

Depending upon specific uses, the composition may contain other ingredients or modifiers, such as shellac glossing, lubricating or plasticizing agents, as in the case of hair sprays. In such products, I preferably include a glossing agent selectable from various materials known to impart gloss to deposited shellac, such as partially transesterified lanolin and isopropanol (sold under the trade name "Isopropylan"), and liquid lanolin wax sold as "Lanogene"), sorbitan trioleate, silicone oils, higher molecular weight alcohols, e.g. oleyl alcohol, and lanolin alcohols. Also included may be appropriate perfumes, dyes and the like as well as a shellac plasticizer such as ceteor oil, glycols and glycerine.

In general, compositions contemplated by the invention will be composed predominately of alcohol and propellant with relatively small proportions of reacted shellac and other components of the character indicated. Ordinarily, and in terms of weight percentages, the anhydrous alcohol content may range from about 25% and 50%, the shellac

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solids from about 0.75% to 3.0%, 2-amino-2-methyl-1-propanol from about 0.15% to 0.4%, and the glossing agent from about 0.15% to 0.4%. Appropriately small amounts of perfume or the like may be added. The balance of the formula in any particular instance may be propellant to constitute a total on which the foregoing percentages are based.

The following may be cited as typical formulations in accordance with the invention, adapted to be packaged in conventional spray valve equipped aerosol containers.

EXAMPLE I

Hydrocarbon system with lower alcohol concentration

Component:	Weight percent
Shellac (Angelo Super Blonde)-----	2.000
2-amino-2-methyl-1-propanol -----	0.300
Lanolin wax-----	0.250
Perfume -----	0.150
Ethyl alcohol-----	27.300
Trichloromonofluoromethane -----	63.500
Propane -----	6.500

EXAMPLE II

Fluorocarbon system with increased alcohol content

Component:	Weight percent
Shellac -----	2.000
2-amino-2-methyl-1-propanol -----	0.300
Lanolin wax-----	0.250
Perfume -----	0.150
Ethyl alcohol-----	37.300
Trichloromonofluoromethane -----	30.000
Dichlorodifluoromethane -----	30.000

I claim:

1. A substantially anhydrous packaged aerosol composition comprising a liquefied normally gaseous propellant, and a mixture of ethyl alcohol and dewaxed shellac reacted with 2-amino-2-methyl-1-propanol in an amount sufficient to maintain non-precipitating compatibility of the shellac with the alcohol and propellant in the packaged state and to render the reacted shellac water soluble after aerosol application in a use state.
2. A composition according to claim 1, containing also an alcohol soluble glossing agent for the applied shellac.
3. A composition according to claim 1, in which said propellant comprises a normally gaseous halogenated hydrocarbon.
4. A composition according to claim 1, in which said propellant comprises a normally gaseous hydrocarbon.
5. A composition according to claim 1, in which the alcohol content is between about 25% and 50% by weight, the shellac solids between about 0.75% and 3.0%, and said propanol between about 0.15% and 0.4%.
6. A composition according to claim 5, containing also about 0.15% to 0.4% of an alcohol soluble glossing agent for the applied wax.

References Cited in the file of this patent

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,142,622

July 28, 1964

Clarence Clapp

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 2, line 42, for "of", first occurrence, read
-- to --.

Signed and sealed this 17th day of November 1964.

(SEAL)

Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents