

[54] SPOT REMOVER FOR WEARING APPAREL

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 59,681, July 30, 1970, abandoned.

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[58] Field of Search 252/89, 170, 171,
252/312; 8/142

[56]

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[57]

ABSTRACT

A cleansing solution for removing spots from cloth and the like comprising the following ingredients:

a detergent of polyethylene glycol ethers such as Union Carbide 15–5–9, a 9 mole ethylene oxide adduct of a secondary alcohol in the range of 10–30 percent by volume;

an acetate solvent of the group including amyl acetate, ethyl acetate, hexyl acetate and butyl acetate in the range of 10–30 percent by volume;

a suitable coupling agent for stability and as a clarifier, such as a glycol ether solvent, for example, Dowanol EB, in the range of 2 ½–10 percent by volume; and water in the range of 30–80 percent by volume.

4 Claims, No Drawings

SPOT REMOVER FOR WEARING APPAREL

RELATED APPLICATION

This application is a continuation in part of my co-pending application, Ser. No. 59,681, filed on July 30, 1970 for Cleansing Solution now abandoned.

BACKGROUND OF THE INVENTION

The present invention relates in general to cleansing solutions and more particularly to a cleansing solution for removing spots from fabrics and the like.

Heretofore, in the dry cleaning of cloth, a vast variety of cleansing solutions were employed to remove a given spot on a trial and error basis. It has been known that in the neighborhood of 15 spot removing chemicals would be on a board for the purpose of removing a spot. Such chemical solutions have been known to damage the color and the fabric and were only partially effective.

In addition, the operator had to have previous exposure as to the identification of the fabric and would seek information as to the type of spot on the fabric, such as lipstick, tea, coffee, paint, food, et cetera so as to be able to apply a particular chemical solution found to be most successful for the particular spot and the particular fabric involved.

SUMMARY OF THE INVENTION

A spot removing solution for wearing apparel and the like comprising:

- a detergent of polyethylene glycol ethers in the range of 10-30 percent by volume;
- an ester solvent of the group including amyl acetate, hexyl acetate and butyl acetate in the range of 10-30 percent by volume;
- a suitable coupling agent for stability and as a clarifier, in the range of 2 1/2-10 percent by volume; and
- water in the range of 30-80 percent by volume.

While the exemplary embodiment makes reference to spot removing from fabrics, the cleansing solution of the present invention can also be employed on carpets, drapes, vinyl floors, ovens, appliances, automobiles, woodwork, tiles, glassware, floors and the like.

The cleansing solution of the present invention has been found to be particularly useful in removing latex or acrylic paints from fabrics while not removing water based vegetable dyes from fabrics.

By virtue of the present invention, a single cleansing solution can be employed to remove spots from fabrics without knowledge of the particular fabric or spot involved. Such spots could be caused by lipstick, blood, tea, coffee, paints, foods, et cetera. Thus, the need for many different chemical solutions has been obviated. The cleansing is achieved without damage to the fabric.

In addition to the foregoing, the work of the spot removing operator at a dry cleaning establishment has been simplified and facilitated. It may be used prior to placing fabrics in the dry cleaning machine, or it may be used as an additive for the dry cleaning machine.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A spot remover for wearing apparel comprising by volume the following:

Ingredients
a detergent of polyethylene

Range By
Volume

glycol ether
an ester solvent
a coupling agent
water

10%-30%
10%-30%
2 1/2%-10%
30%-80%

The detergent is of the polyethylene glycol ether of an alcohol with a carbon range of C₈-C₁₇ with a ethylene oxide adduct of a range of 7-15 mole EtO. In the alternative, the detergent may be an ethoxylated alkyl phenol of a carbon range of C₈-C₁₇ with ethylene oxide adduct of 7-15 moles EtO.

The ester solvent is of the group comprising amyl acetate, butyl acetate, hexyl acetate or ethyl acetate. Preferably, the acetate is amyl acetate.

For clarification and stability a suitable active coupling agent may be employed. The coupling agents could be a glycol ether solvent, such as Dowanol EB or its related esters of the glycol ether solvents class. The use of a coupling agent is optional. The coupling agent may also be an alcohol such as ethyl, propyl, methyl or butyl alcohols. The coupling agents serve as active stain or spot removing ingredients in that it removes hydrocarbon, grease, oil and similar stains.

The preferred embodiment of the cleansing solution of the present invention is as follows by volume:

a detergent of polyethylene glycol ether	20%
amyl acetate	20%
coupling agent	5%
water	55%

In the preparation of the cleansing solution, the detergent, amyl acetate and the coupling agent are poured into a suitable receptacle. Water is then added and the ingredients are mixed well to form the cleansing solution..

I claim:

1. A spot remover for wearing apparel and the like consisting essentially of:

- a polyethylene glycol ether detergent of an alcohol with a carbon range of C₈-C₁₇ with an ethylene oxide adduct of a range of 7 - 15 mole ETO, said polyethylene glycol ether detergent being of the range 10 - 30 percent by volume for removing a spot from wearing apparel,
- an ester solvent of the group comprising an amyl acetate, ethyl acetate, butyl acetate and hexyl acetate of the range 10 - 30 percent by volume for removing a spot from wearing apparel; and
- water of the range 30 - 80 percent by volume for removing a spot from wearing apparel.

2. A spot remover for wearing apparel and the like consisting essentially of:

- an ethoxylated alkyl phenol of a carbon range of C₈ - C₁₇ with ethylene oxide adduct of 7 - 15 moles ETO, said ethoxylated alkyl phenol being of the range 10 - 30 percent by volume for removing a spot from wearing apparel,
- an ester solvent of the group comprising an amyl acetate, ethyl acetate, butyl acetate and hexyl acetate of the range 10 - 30 percent by volume for removing a spot from wearing apparel; and
- water of the range 30 - 80 percent by volume for removing a spot from wearing apparel.

3. A spot remover as claimed in claim 1 wherein a coupling agent is provided for stability and clarification of the range 2 1/2 - 10 percent by volume, said coupling agent being of the group comprising, ethyl alcohol, propyl alcohol, methyl alcohol and butyl alcohol.

4. A spot remover as claimed in claim 2 wherein a coupling agent is provided for stability and clarification of the range 2 1/2 - 10 percent by volume, said coupling agent being of the group comprising, ethyl alcohol, propyl alcohol, methyl alcohol and butyl alcohol.

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