Patented Oct. 12, 1943 2,331,396

UNITED STATES PATENT OFFICE

2,331,396

LAUNDRY SOUR

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No Drawing. Application March 9, 1942, Serial No. 433,870

3 Claims. (Cl. 252—136)

The present invention relates to a new and improved souring composition adapted for use in the laundering of clothes.

Laundry sour is commonly used to neutralize any detergent remaining in the clothes after rinsing. It neutralizes the alkali in the water and any products resulting from the bleaching operation. Souring to a low pH also causes the destruction of bacteria.

We propose to use a modified sour which is composed of sodium acid fluoride (NaF.HF) and sodium hexameta phosphate ($(NaPO_3)6$ for stabilizing the acid radical and for imparting various other desirable characteristics to the composition.

The sodium hexameta phosphate serves to stabilize the acid fluoride and hence prevents the gradual loss of hydrofluoric acid. As a result, the keeping qualities of the sour are much improved since the sour is thus rendered substantially stable. Unnecessary expense, which would otherwise be incurred by reason of deterioration or spoilage, is avoided. Furthermore, the effectiveness of the sour is reliably maintained, thereby insuring good control of the souring practice.

The composition is finely granulated, which imparts to it an improved physical appearance, and in this respect is distinctly different than other compositions used for the same general purpose. The sodium hexameta phosphate has the property of absorbing a slight amount of moisture. The absorbed moisture in the finely granulated mass serves to prevent the forming of dust in the normal handling of the composition.

Fatty acids resulting from the action of the sour on absorbed or precipitated soaps are effectively emulsified and dispersed throughout the solution. The coagulation and accumulation of such acids on the fabrics being washed is, therefore, prevented. Because of the emulsification and dispersion of the fatty acids and the solubilizing of other residual deposition products by the sour, uniformly clear and absorbent fabrics are obtained and these fabrics will take the bluing evenly.

The proportions of the ingredients may be varied within certain limits. The desirable results are obtained to a considerable and acceptable extent by the use of the sour containing as low as 1% of the phosphate. In particular, the acid fluoride is stabilized, dust is substantially eliminated, and a finely granulated appearance is imparted to the composition. Somewhat improved results, particularly as to the emulsification and dispersion of the fatty acids and other deposition products, are obtained upon increasing the phosphate content, for example, to approximately 2%.

The desired results are also obtainable with the use of higher percentages of the phosphate, but a maximum limit of 10% is desirable, since amounts of phosphate in excess thereof tend to dilute the sodium acid fluoride unduly and may absorb an excess quantity of moisture. We have found that satisfactory results are obtained when the laundry sour comprises the following ingredients in the following proportions by weight:

	Per cent
Sodium acid fluoride	90–99
Sodium hexameta phosphate	10– 1

The preferred composition comprises the following ingredients in the following proportions by weight:

	Per cent
Sodium acid fluoride, approximately	98
Sodium hexameta phosphate, approximately	2

It will be seen that we have provided an improved laundry sour which serves to neutralize detergents remaining in the clothes after rinsing. The sour also avoids many of the objections inherent in the use of other materials commonly employed for the same purpose. The sour is distinctly different and improved in appearance, easy to handle without being dusty, and stable in composition.

We claim as our invention:

1. A laundry sour consisting of the following ingredients in the following proportions by weight:

	Per cent
Sodium acid fluoride, approximately	98
Sodium hexameta phosphate, approximately	2

2. A laundry sour consisting of the following ingredients in the following proportions by weight:

	Per cent
Sodium acid fluoride	90–99
Sodium hexameta phosphate	10– 1

3. A laundry sour consisting of sodium acid fluoride and sodium hexameta phosphate in an amount sufficient to stabilize the acid fluoride.

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