

ALIEN PROPERTY CUSTODIAN

BAR SOAP COMPOSITION

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This invention relates to an improved bar soap composition and more particularly to such a composition consisting essentially of a sodium soap and a small proportion of an alkali metal polyphosphate.

The use of alkali metal pyro and meta-phosphates as anti-precipitating agents in hard water is now well known. Furthermore, these materials have been suggested for use in combination with soap as soap-improving ingredients in powdered and liquid soap mixtures. They have not been satisfactory for use in solid bar soap because the pyrophosphates tend to crystallize and produce a soap of frosty appearance which is unsightly and unsalable. The meta-phosphates are not stable in the presence of the amount of moisture required in a bar soap.

The use of molecularly dehydrated phosphates has also been suggested in powdered aluminum soap mixtures in combination with oxygen yielding materials, but the function of the soap in such instances is not that of a detergent. It serves, on the contrary, to delay or inhibit the reaction of the oxygen yielding materials when placed in water.

In accordance with the present invention, a bar soap is produced by intimately admixing with a suitably moist sodium soap a small proportion, preferably not less than 15%, of an alkali metal tri-polyphosphate.

The preferred polyphosphate is sodium tri-poly-

phosphate ($\text{Na}_5\text{P}_3\text{O}_{10}$). It is stable in moist bar soaps and does not produce an undesirable appearance on the passage of time. It greatly improves the emulsifying power of the soap in hard water, yields a rich creamy lather, and modifies the alkaline reaction of the soap so that it will not irritate the skin.

As an example of the soap composition, 100 kilograms of a solid laundry soap having a 75% fatty acid content was mixed with 6 kilograms of sodium tri-polyphosphate and 14 kilograms of water. The mixture was then milled to a homogeneous mass, shaped, and permitted to set up into a hard solid mass. After three years 85% of the phosphate was still in the form of the original tri-polyphosphate.

The amount of sodium tri-polyphosphate may be varied over a wide range, but in general it is preferred to employ from 5% to 15% based upon the total weight of the soap bar. Amounts from 1% to 5%, however, are quite satisfactory for use in most types of water, and particularly the softer waters.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom for some modifications will be obvious to those skilled in the art.

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