New Trends on Pearlizing Agents: Past, Present and ...DANOX®PL-10

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Summary

Pearlizing agents are widely used in cleansing cosmetic products to improve their appearance. By incorporating them a white product with a high shiny and brilliant appearance is obtained.

Many different materials can be used to obtain this effect but if waxes are used the procedure is complicated. To solve this the industry has developed mixtures of these waxes with some of the ingredients used in the final products that are very easy to use and give excellent results[1].

Mainly all the pearlescent concentrates that can be found in the market are based on Ethylene Glycol Distearate (EGDS) and fatty amides. The use of fatty amides helps the formation of crystals of EGDS and improves the nacreous appearance. Recently, fatty amides have been abandoned due to increasing sensitivity in the market, and there is a trend towards milder and more innocuous products.

Following European trends in pearlizing agents, we have developed DANOX® BF-22 without alkanolamides; the preservative was eliminated in DANOX® P-15 and our latest product DANOX® PL-10, does not contain amides, is preservative free, highly concentrated and very mild to the skin and eyes, maintaining an excellent performance. Furthermore ingredients of the DANOX® PL-10 improve skin and hair condition by increasing moisture content.

Introduction

Image and appearance have always been very important and for cosmetic products even more so. The marketing image of pearlescent shampoos is that they contain something extra (a conditioner, a balsam, oils, etc) whereas clear shampoos are light and pure. For years the nacreous or iridescent appearance has been used in personal care products, mainly shampoos and body cleansers. This pearlizing effect gives an appearance of richness and luxuriousness, which makes cosmetic products more attractive to consumers.

Other reasons to use pearlizing agents is to hide a hazy or slightly opaque appearance produced by the incorporation of poor soluble additives; to improve foam quality and, among others, to reduce the defatting effects on the skin due to the fatty character of the pearlizing materials.

Pearlizing Agents

It is well known that in order to obtain a nacreous appearance, different materials are used, for example, inorganic substances in powder form (metal oxides or pigments) or organic substances such as pearlescent waxes (long chain alcohols, glycol stearates, etc). All these products present some application difficulties. If inorganic substances are used, it is necessary to include a thickener or a rheology modifier, in order to keep the suspension stable. The incorporation of waxes, which are hardly soluble and dispersible, implies heating up to 10ºC above wax melting point and cooling down the mixture under controlled conditions. In both cases, the cost of the final product is higher.

To overcome these problems, pearlizing concentrated mixtures have been developed; crystals are already formed and they can be easily incorporated at the end of the formulation process achieving the desired appearance.

What is a Pearlizing Agent Concentrate?

A **P**earling **A**gent **C**oncentrate[2] **(PAC)** is a product, normally containing a fatty acid ester dispersed or suspended in a surfactant base. It can be added directly to a final composition (shampoo, bath gel, face cleanser, etc) at room temperature, and can be easily homogenized under moderate stirring. It gives to the final product a nice pearled shine, more or less opaque depending on the percentage used (normally 2-10%).

The most important component included in a PAC is the product that confers the characteristic pearlescent effect. Ethylene Glycol Esters are the waxes normally used to achieve this characteristic. Glycol Stearate and Glycol Distearate are the most relevant. Glycol Stearate is a poor emulsifier since