

TUBA – IS RATIONAL KIND OF PACKAGING FOR COSMETIC GOODS

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In today's world of cosmetics use various types of packaging, from exclusive and expensive bottles to convenient and practical tubes. Consumer in choosing of cosmetic product, in addition to cosmetic effect is also guided and convenience package. Analyzing the range of cosmetic goods on the market of Ukraine, we came to the conclusion that the leading place among the presented range of cosmetic packaging takes tuba. It is not surprising, because the tube reliably protects the product from the environment, it allows you to dispense the contents without any additional devices, tightly capped immediately after use, do not expose this product to microbial contamination, provides long-term storage.

There are three main types of aluminum tubes (metal); polymer; laminate (composite material - a combination of plastic and aluminum).

Aluminum tube - is not weld membrane in her neck is a physical part of the tube, and with repeated flexion (rolling) "tail" of the tube is obtained almost hermetically packaged product. Aluminum tubes have the highest barrier properties compared to other types of tubes. When deformation aluminum tubes will not be returned to its original state as a result of the air does not get inside the tube and the product is not subject to oxidation. Aluminium tubes are also widely used in the pharmaceutical industry. But also this type of tube has its drawbacks, namely low resistance to mechanical stress. When squeezing the contents of the tube, or at random mechanical deformation on the surface of the tube formed dents, spoiling the appearance of the tube. In the field of education dents decorative coating is destroyed and lost the appeal of the finished product.

The polymer tube - seamless, comfortable, practical, attractive packaging from soft polyethylene. Polymer tubes can be transparent and opaque, with lacquered glossy or matte finish. This depends on the specific content of the pigment in the material composition of the tube and the outer cover. Polymer tubes, due to the elasticity of the material is not deformed during use. After extrusion plastic tube sucks air and takes the original form. This "flexibility" is achieved due to the lack of permanent deformation of the material tube and is not always beneficial on the content of products. Indeed, with the air in the tube can penetrate bacterium. One drawback of this type of tubes - a low barrier properties, as well as the fact that it

easily penetrates through the plastic oxygen and water vapor. Therefore, the polymer tubes do not pack the products that require high barrier properties of the package.

Laminate tube - it is ergonomic, comfortable, universal and attractive outer packaging. On laminate tubes is necessarily present seam. Modern technologies allow to make the seam is very neat and almost invisible.

Today on the market there are two types of laminate tubes: - PBL (Plastic Barrier Layer - a plastic barrier layer), - ABL (Aluminium Barrier Layer - aluminum barrier layer).

Laminate tube with barrier layer PBL is a complex chemical compound based plastics. The protective properties of PBL - laminate significantly inferior to those of ABL, they cannot provide complete protection from the contents of the tube microbial contamination, the influence of sunlight, air and water penetration. Laminate tubes type of PBL used for packaging cosmetic products with a low content of active and special additives.

Laminate tube with barrier layer ABL is a thin (12 - 40 micro mm) aluminum foil. Between the outer and inner layers is a barrier layer of aluminum tubes. It effectively separates the product and the external environment of the product is not necessary to evaporate the substance in the tube with the product will not get harmful substances from the external environment. Thus, ABL tube becomes impossible oxidation, fermentation, chemical and physical changes of production. The outer layer of the composition of materials in the ABL - polyethylene. Because of this layer tube is pleasant to touch. Polyethylene can be painted in any color or made transparent. The outlet tube type of ABL sealed protective membrane. Then, the resulting tube screw cap (buschon).

Laminated tubes well keep their shape during transport and use. Therefore, laminated tubes are far ahead of aluminum tubes for visual appeal and plastic tubes for protective properties, and it is a strong advantage in the fight for the attention of buyers. Laminated Tubes have all the advantages of aluminum tubes, but at the same time provide ample opportunities for decorating the appearance and ease of use.

According to the results of research, it was found that the leader among Tubna packages is laminate tube with a layer of ABL. Summarizing the analysis of tube packaging the following conclusion: the highest level of protection provided with a layer of laminate tubes ABL. Laminated tubes with a layer of ABL recommended MoH Ukraine as packaging for products with high demands on storage conditions:

- for packing of medical and preventive goods;
- baby creams;
- effective cosmetic goods with a high content of active and special additives.