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(54) **FOAM HAVING IMPROVED FEELING DURING USE**

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Yongin-si (KR); **Yeong Jin Choi**,  
Yongin-si (KR)

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2201/036; C08J 2307/00; A45D 34/04;  
A45D 34/00; A45D 2200/1036; A45D  
2200/1018; A61K 2800/87  
See application file for complete search history.

(73) Assignee: **Amorepacific Corporation**, Seoul (KR)

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claimer.

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CPC ..... **A61K 8/0208** (2013.01); **A45D 34/00**  
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**40/26** (2013.01); **A61K 8/046** (2013.01); **A61K**  
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**A61Q 17/04** (2013.01); **A61Q 19/00**  
(2013.01); **C08J 9/40** (2013.01); **A45D**  
**2200/1018** (2013.01); **A45D 2200/1036**  
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(57) **ABSTRACT**

The present invention relates to a foam made of a specific  
material having superior properties and to cosmetics com-  
prising said foam.

**3 Claims, 1 Drawing Sheet**

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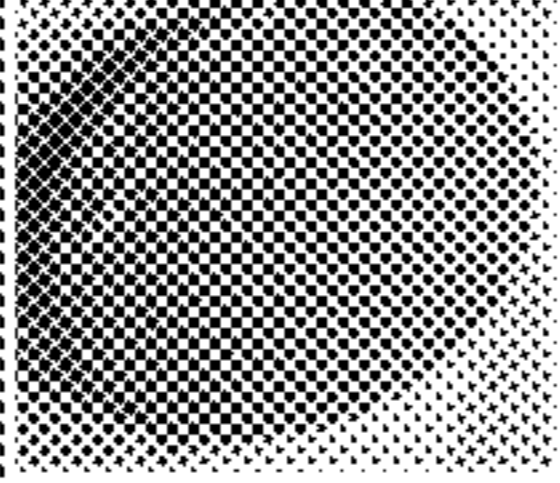
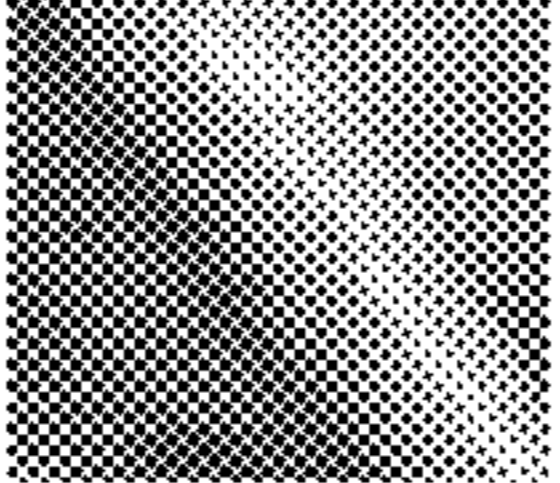
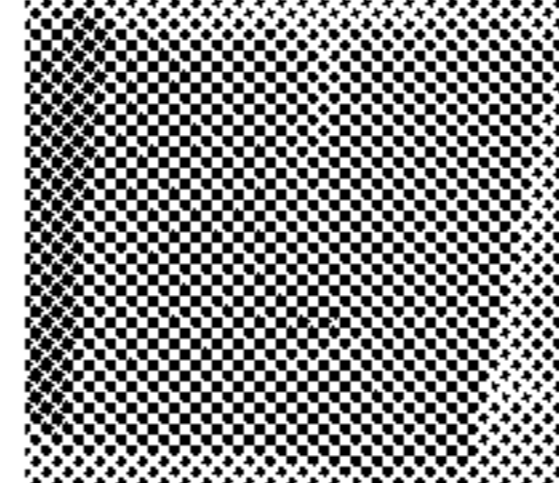
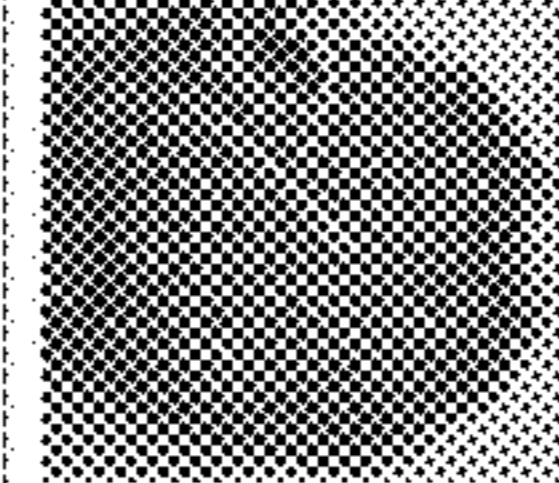
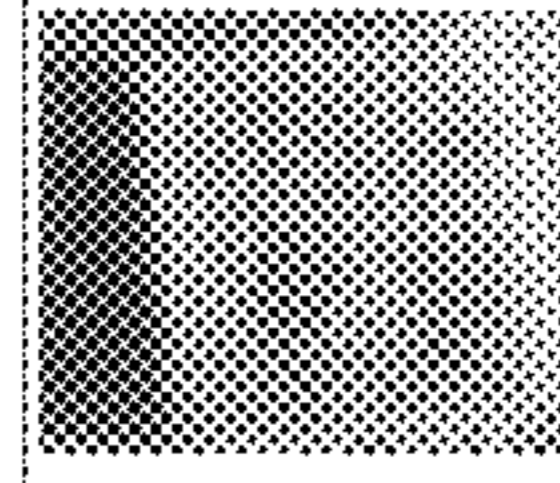
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	Comp. Ex.	Ex.1	Ex.2	Ex.3	Ex.4	Ex.5
Images						
Adhesion	1	5	4	4	4	5
Finish	1	4	4	4	4	4
Thin application	2	5	4	4	4	5
Soft applicability	1	4	4	4	5	4
Consistency	1	4	4	4	4	5
Uniformness	1	4	4	4	4	5
Softness	1	4	4	4	5	4
Smoothness	2	4	5	4	4	5
Improved skin texture	1	4	4	5	4	4
Silkiness	2	4	4	5	4	4

**FOAM HAVING IMPROVED FEELING  
DURING USE**

**Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue; a claim printed with strikethrough indicates that the claim was canceled, disclaimed, or held invalid by a prior post-patent action or proceeding.**

CROSS REFERENCE TO RELATED  
APPLICATIONS

This application is a continuation of U.S. application Ser. No. 14/391,088, now U.S. Pat. No. 9,844,496, which is a National Stage application of PCT/KR2013/003101, filed Apr. 12, 2013, which claims the benefit of Korean Patent Application No. 10-2013-0039638 filed on Apr. 11, 2013 and Korean Patent Application No. 10-2012-0038132 filed on Apr. 12, 2012, each of which is incorporated by reference in their entirety herein.

TECHNICAL FIELD

The present disclosure relates to a foam having superior properties and a cosmetic comprising the same.

BACKGROUND ART

A cosmetic composition is commonly provided as stored in a vacuum container, a pump container or a glass container. However, these containers are inconvenient to carry. Recently, as the necessity of putting on or adjusting makeup outdoors increases, there is a need of a cosmetic composition that can be carried conveniently.

A compact-type container may be considered as a container capable of conveniently carrying a cosmetic composition. In order to hold a liquid cosmetic composition in the compact-type container, it should be considered whether the container is compatible with the carrier for cosmetic composition, whether the cosmetic composition can be effectively held in the carrier, whether the carrier can hold the cosmetic composition stably for a long time and whether an adequate amount of the cosmetic composition can be ejected from the carrier.

The inventors of the present disclosure have found out that a foam prepared from a specific material provides superior skin adhesion, finish, thin application, soft applicability, consistency, uniformness, softness, smoothness, improved skin texture or silkiness.

More specifically, the inventors of the present disclosure have confirmed that a foam prepared from a specific material provides superior skin adhesion, reduced skin roughness, improved skin texture or improved applicability.

BRIEF DESCRIPTION OF THE DRAWINGS

The FIGURE is a table showing the results of a panel evaluation on a scale of 1 (very poor) to 5 (very good) of several parameters relating to hand application of a cosmetic composition after storage each of the foams of Examples 1 to 5 compared to direct hand application of the cosmetic composition (Comp. Ex) and a photographic image of each foam.

DISCLOSURE

Technical Problem

The inventors of the present disclosure have found out that when an adequate amount of a cosmetic composition absorbed in a specific foam is taken with a hand and applied on the face, feeling of use is remarkably improved over when the cosmetic composition not absorbed in the foam is directly applied on the face. The present disclosure is directed to providing a foam providing improved feeling of use and a cosmetic comprising the same.

Technical Solution

In one general aspect, the present disclosure provides a foam for improving skin adhesion of a cosmetic composition, consisting of one or more material selected from a group consisting of acrylonitrile-butadiene rubber (NBR), styrene-butadiene rubber (SBR) and natural rubber (NR), and a cosmetic comprising the same.

In another general aspect, the present disclosure provides a foam for reducing skin roughness of a cosmetic composition, comprising one or more material selected from a group consisting of polyvinyl chloride, polyethylene and ethylene-vinyl acetate (EVA), and a cosmetic comprising the same.

In another general aspect, the present disclosure provides a foam for improving skin texture of a cosmetic composition, comprising one or more material selected from a group consisting of latex, silicone, film-type, styrene-isoprene-styrene (SIS), styrene-ethylene-butylene-styrene (SEBS), polyvinyl alcohol (PVA), silicone elastomer, nitrile, butyl, polyether and neoprene, and a cosmetic comprising the same.

Advantageous Effects

Foams of the present disclosure includes various materials so that provide improved skin adhesion, reduced skin roughness, improved skin texture or improved applicability and allow convenient use of a cosmetic composition with improved stability and portability. Since the foams have different uses, they may provide optimized feeling of use of cosmetics.

BEST MODE

As used herein, a "foam" refers to a polymer foamed by dry or wet foaming.

As used herein, "flocking" refers to a process of depositing very short fibers (flock) onto, e.g., a foam.

As used herein, "impregnation" means that a cosmetic composition is carried in a foam.

In an aspect, the present disclosure provides a foam for impregnating a cosmetic composition, comprising one or more material selected from a group consisting of acrylonitrile-butadiene rubber (NBR), styrene-butadiene rubber (SBR), natural rubber (NR), polyvinyl chloride, polyethylene, ethylene-vinyl acetate (EVA), latex, silicone, film-type, styrene-isoprene-styrene (SIS), styrene-ethylene-butylene-styrene (SEBS), polyvinyl alcohol (PVA), silicone elastomer, nitrile, butyl, polyether and neoprene.

In an exemplary embodiment of the present disclosure, the foam may be flocked with cotton, cotton/acryl, cotton/acryl/polyester, cotton/rayon, acryl, polyamide, nylon, polyester, nylon/polyester or silk.

In another aspect, the present disclosure provides a foam for improving skin adhesion of a cosmetic composition, comprising a rubber, for example, one or more material selected from a group consisting of acrylonitrile-butadiene rubber (NBR), styrene-butadiene rubber (SBR) and natural rubber (NR).

“Improved skin adhesion” means that, when a cosmetic composition impregnated in the foam is applied to the skin, the cosmetic composition is tightly adhered to the surface of the skin without getting loose. The foam of the present disclosure is advantageous in that the cosmetic composition can be applied on the skin tightly, thinly and uniformly and thus can provide silkiness to the skin.

In another aspect, the present disclosure provides a cosmetic comprising: the foam; and a cosmetic composition impregnated in the foam.

In another aspect, the present disclosure provides a foam for reducing skin roughness of a cosmetic composition, comprising a vinyl, for example, one or more material selected from a group consisting of polyvinyl chloride, polyethylene and ethylene-vinyl acetate (EVA).

“Reduced skin roughness” means that, when a cosmetic composition impregnated in the foam is applied to the skin, the cosmetic composition makes the skin surface even by filling the unevenness of the skin. The roughness of the skin may be formed by pimples, scars or pores, but is not limited thereto.

In another aspect, the present disclosure provides a cosmetic comprising: the foam; and a cosmetic composition impregnated in the foam.

In another aspect, the present disclosure provides a foam for improving skin texture of a cosmetic composition, comprising a silicone, for example, one or more material selected from a group consisting of latex, silicone, film-type, styrene-isoprene-styrene (SIS), styrene-ethylene-butylene-styrene (SEBS), polyvinyl alcohol (PVA), silicone elastomer, nitrile, butyl, polyether and neoprene.

“Improving skin texture” means, when the skin tone is nonuniform due to intrinsic or extrinsic factors or when the skin texture is bumpy, making the skin tone uniform or making the skin texture smooth. The skin tone may be nonuniform due to pigmentation, aging, exposure to UV, etc., but is not limited thereto.

In another aspect, the present disclosure provides a cosmetic comprising: the foam; and a cosmetic composition impregnated in the foam.

In another aspect, the present disclosure provides a foam for improving skin applicability of a cosmetic composition, wherein the foam described above is flocked with cotton, cotton/acryl, cotton/acryl/polyester, cotton/rayon, acryl, polyamide, nylon, polyester, nylon/polyester or silk.

“Improved skin applicability” means that the cosmetic composition can be applied thinly and uniformly on the skin without scrubbing or coming off and, thus, a natural feeling of use is provided.

In another aspect, the present disclosure provides a cosmetic comprising: one or more of the foam; and a cosmetic composition impregnated in the foam.

In an exemplary embodiment of the present disclosure, the cosmetic composition may be in liquid or solid state. Specifically, the cosmetic composition may be solution, emulsion, gel, cream or suspension.

In an exemplary embodiment of the present disclosure, the cosmetic composition may be an aqueous dispersion, an oily dispersion, a water-in-oil (W/O) emulsion or an oil-in-water (O/W) emulsion.

In general, a cosmetic composition in liquid state is difficult to carry and store as compared to one in solid state. However, the cosmetic comprising the foam according to the present disclosure is advantageous in that even a cosmetic composition in liquid or cream state can be stored and carried stably and safely. If the cosmetic composition is in solid state, it can be comprised in the carrier (foam) to reduce instant change in physical properties due to heat or external impact. Further, since the carrier serves to fix the cosmetic composition, an adequate amount of the content can be ejected.

In an exemplary embodiment of the present disclosure, the cosmetic composition that may be comprised in the cosmetic may be an emulsion composition, specifically a water-in-oil (W/O) emulsion or an oil-in-water (O/W) emulsion, or a dispersion composition, specifically an oily dispersion or an aqueous dispersion.

In an exemplary embodiment of the present disclosure, the cosmetic composition that may be comprised in the cosmetic may be prepared into, for example, makeup primer, makeup base, liquid or solid foundation, concealer, lipstick, lip gloss, powder, lip liner, eyebrow, eye shadow, blusher (blusher), twin cake, sunscreen, lotion, cream, essence, etc., but is not limited thereto.

[In an exemplary embodiment of the present disclosure, the cosmetic impregnated in the foam may be applied to the skin using a hand or an applicator (e.g., puff).]

Hereinafter, the present disclosure will be described in detail through examples. However, the following examples are for illustrative purposes only and it will be apparent to those of ordinary skill in the art that the scope of the present disclosure is not limited by the examples.

#### Preparation Example

A cosmetic composition (emulsion) containing the components described in Table 1 was impregnated in foams of Examples 1-5.

TABLE 1

Components	Contents (wt %)
Ozokerite	0.1
Dicaprylyl carbonate	10.0
Methylparaben	0.1
Octyl methoxycinnamate	7.0
Isoamyl p-methoxycinnamate	2.0
Disteardimonium hectorite	0.2
Decamethylcyclopentasiloxane	16.0
Sorbitan sesquioleate	2.0
Lauryl PEG/PPG-18/18 methicone	1.5
Poly(methyl methacrylate)	5.0
Titanium dioxide/aluminum hydroxide/stearic acid	7.0
Water	To 100
Glycerine	8.0
Salt	1.0
Fragrance	0.4
Total	100.0

#### Comparative Example

At room temperature, 0.5 g of the cosmetic composition was taken with a hand and applied onto the face.

#### Example 1

At room temperature, the cosmetic composition was impregnated in a foam prepared from acrylonitrile-butadi-

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ene rubber (NBR) and having a diameter of 48 mm and a thickness of 50 mm. After waiting for 2 hours until stabilization, 0.5 g of the cosmetic composition was ejected from the foam by pressing with a hand and applied onto the face.

## Example 2

At room temperature, the cosmetic composition was impregnated in a foam prepared from polyvinyl chloride and having a diameter of 48 mm and a thickness of 50 mm. After waiting for 2 hours until stabilization, 0.5 g of the cosmetic composition was ejected from the foam by pressing with a hand and applied onto the face.

## Example 3

At room temperature, the cosmetic composition was impregnated in a foam prepared from latex and having a diameter of 48 mm and a thickness of 50 mm. After waiting for 2 hours until stabilization, 0.5 g of the cosmetic composition was ejected from the foam by pressing with a hand and applied onto the face.

## Example 4

At room temperature, the cosmetic composition was impregnated in a foam prepared from polyether and flocked with polyester and having a diameter of 48 mm and a thickness of 50 mm. After waiting for 2 hours until stabilization, 0.5 g of the cosmetic composition was ejected from the foam by pressing with a hand and applied onto the face.

## Example 5

At room temperature, the cosmetic composition was impregnated in a foam prepared from polyether and having a diameter of 48 mm and a thickness of 50 mm. After waiting for 2 hours until stabilization, 0.5 g of the cosmetic composition was ejected from the foam by pressing with a hand and applied onto the face.

## Test Example

Evaluation was performed by 5 professional women panels who were aged 24-35 years, had makeup experiences for at least 2 years and wore makeup at least 5 times a week. They were asked to evaluate each test item with 5-point standards (1: very poor, 2: poor, 3: moderate, 4: good, 5: very good). The result is given in the FIGURE.

'Adhesion' is indicative of skin adhesion. 'Finish' is indicative of stickiness or other residual feeling after application to the skin. 'Thin application' is indicative of thickness of makeup after application to the skin. 'Soft applicability' is indicative of applicability to the skin. 'Consistency' is indicative of consistency of makeup after application to the skin. 'Uniformness' is indicative of reduced partial lumping after application. 'Softness' is indicative of baby face-like softness after application. 'Smoothness' is indicative of reduced skin roughness. 'Improved skin texture' is indicative of mending of skin tone or providing of smooth skin texture. 'Silkiness' is indicative of smooth application to the skin.

Those skilled in the art will appreciate that the conceptions and specific embodiments disclosed in the foregoing description may be readily utilized as a basis for modifying or designing other embodiments for carrying out the same purposes of the present disclosure. Those skilled in the art

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will also appreciate that such equivalent embodiments do not depart from the spirit and scope of the disclosure as set forth in the appended claims.

The invention claimed is:

**[1.** A cosmetic comprising:

one or more of a foam impregnated with a cosmetic composition for storing the cosmetic composition, wherein the foam comprises one or more material selected from a group consisting of acrylonitrile-butadiene rubber (NBR), styrene-butadiene rubber (SBR), natural rubber (NR), polyvinyl chloride, polyethylene, ethylene-vinyl acetate (EVA), latex, silicone, film-type, styrene-isoprene-styrene (SIS), styrene-ethylene-butylene-styrene (SEBS), polyvinyl alcohol (PVA), silicone elastomer, nitrile, butyl and polyether and neoprene; the cosmetic composition impregnated in the foam; and an applicator onto which the cosmetic composition is ejected,

wherein the one or more material is selected from a group consisting of acrylonitrile-butadiene rubber (NBR), styrene-butadiene rubber (SBR) and natural rubber (NR) when the foam is used for improving skin adhesion of a cosmetic composition;

wherein the one or more material is selected from a group consisting of polyvinyl chloride, polyethylene and ethylene-vinyl acetate (EVA) when the foam is used for reducing skin roughness of a cosmetic composition;

wherein the one or more material is selected from a group consisting of latex, silicone, film-type, styrene-isoprene-styrene (SIS), styrene-ethylene-butylene-styrene (SEBS), polyvinyl alcohol (PVA), silicone elastomer, nitrile, butyl, polyether and neoprene when the foam is used for improving skin texture of a cosmetic composition; and

wherein the cosmetic composition is an aqueous dispersion, an oily dispersion, a water-in-oil (W/O) emulsion or an oil-in-water (O/W) emulsion.]

**[2.** The cosmetic according to claim 1, wherein the foam is flocked with cotton, cotton/acryl, cotton/acryl/polyester, cotton/rayon, acryl, polyamide, nylon, polyester, nylon/polyester or silk.]

**[3.** The cosmetic according to claim 1, wherein the one or more material is selected from a group consisting of acrylonitrile-butadiene rubber (NBR), styrene-butadiene rubber (SBR) and natural rubber (NR) and the foam is used for improving skin adhesion of a cosmetic composition.]

**[4.** The cosmetic according to claim 3, wherein the foam is flocked with cotton, cotton/acryl, cotton/acryl/polyester, cotton/rayon, acryl, polyamide, nylon, polyester, nylon/polyester or silk.]

**[5.** The cosmetic according to claim 1, wherein the one or more material is selected from a group consisting of polyvinyl chloride, polyethylene and ethylene-vinyl acetate (EVA) and the foam is used for reducing skin roughness of a cosmetic composition.]

**[6.** The cosmetic according to claim 5, wherein the foam is flocked with cotton, cotton/acryl, cotton/acryl/polyester, cotton/rayon, acryl, polyamide, nylon, polyester, nylon/polyester or silk.]

**[7.** The cosmetic according to claim 1, wherein the one or more material is selected from a group consisting of latex, silicone, film-type, styrene-isoprene-styrene (SIS), styrene-ethylene-butylene-styrene (SEBS), polyvinyl alcohol (PVA), silicone elastomer, nitrile, butyl, polyether and neoprene and the foam is used for improving skin texture of a cosmetic composition.]



**[8.** The cosmetic according to claim 7, wherein the foam is flocked with cotton, cotton/acryl, cotton/acryl/polyester, cotton/rayon, acryl, polyamide, nylon, polyester, nylon/polyester or silk.]

**9.** A method of improving adhesion of a cosmetic composition to skin comprising

ejecting a cosmetic composition from a carrier foam onto an applicator, wherein the cosmetic composition is stored within the carrier foam and the carrier foam comprises one or more material selected from the group consisting of acrylonitrile-butadiene rubber (NBR), and styrene-butadiene rubber (SBR), polyvinyl chloride, latex, and polyether], and wherein the cosmetic composition is in a liquid or cream state, wherein the cosmetic composition is an aqueous dispersion, an oily dispersion, a water-in-oil (W/O) emulsion or an oil-in-water (O/W) emulsion; and

applying the ejected cosmetic composition to skin to achieve improved adhesion of the cosmetic composition to the skin.

**10.** The method of claim 9, wherein the carrier foam comprises NBR.

*11. The method of claim 9, wherein the carrier foam is flocked with cotton, cotton/acryl, cotton/acryl/polyester, cotton/rayon, acryl, polyamide, nylon, polyester, nylon/polyester or silk.*

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