



## Encore PenSomal Cream

Encore PenSomal Cream is a premium base specifically formulated to optimize the penetration of a wide array of active pharmaceutical ingredients. It has been designed to complement all of your transdermal applications and to deliver a pharmaceutically elegant finished product.

PenSomal Cream works to enhance skin penetration of topical treatments with a light, silky feel. Compounds found in this formula also contain UV-filters to improve the performance of sunscreen.

### Benefits:

- Enhances skin softness
- Thickens formulations
- Lightweight emulsifier compounds
- Improves penetration of topical treatments

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# PenSomal Cream

## Ingredient List

### **Acrylates Copolymer**

The Acrylates Copolymer group contains monomers acrylic acid or methacrylic acid or one of these substances salts or esters. It is often used as a binder, suspending agent, or emulsion stabilizer in cosmetics.<sup>1</sup> Acrylates copolymer is known to improve the effectiveness of SPF in sunscreen.<sup>2</sup> It also is used to improve the permeability and solubility of transdermal drug therapies.<sup>3</sup>

### **Butyrospermum Parkii (Shea Butter)**

Shea butter is a vegetable fat obtained from trees that are native to Africa. It is composed of fatty acids and used for skin conditioning. A skin formula that included shea butter oil found that its properties helped to reduce skin irritation.<sup>4</sup>

### **Caprylic/Capric Triglycerides**

As a microemulsion base, caprylic/capric triglycerides were used in combination with other microemulsions to find it improved skin penetration of a topical skin medications.<sup>5,6,7</sup> It has also been used to increase the delivery of lycopene through the skin and improve antioxidant activity in the tissue.<sup>8</sup>

### **Carthamus Tinctorius**

Safflower seed oil (Carthamus Tinctorius) is often used in cosmetics and personal care products and is known as an antioxidant among many other benefits.<sup>9</sup> It has been shown to have protective qualities against UV radiation that can cause skin photoaging.<sup>10</sup> It even helps to promote hair growth by stimulating hair follicles.<sup>11</sup>

### **Cetearyl Alcohol**

Cetearyl alcohol is a mixture of fatty acid alcohols, or combination of cetyl and stearyl alcohols, that come from vegetable or synthetic sources. It is often used as an emulsifier in combination with other compounds to stabilize the substance and support permeability and retention in the skin.<sup>12,13</sup>

### **Cetearyl Alcohol (and) Dicetyl Phosphate (and) Ceteth-10 Phosphate**

As a combination, these phosphate-based emulsifying wax are used in topical formulations that contain UV-filters or sunscreens to enhance the performance on the skin.<sup>14,15,16</sup>

### **Cetyl Alcohol (and) Glyceryl Stearate (and) PEG-75 Stearate (and) Ceteth-20 (and) Steareth-20**

As an emulsifier and non-ionic surfactants, these compounds are used in personal care products to increase solubility.<sup>17</sup> The antioxidant compound, epigallocatechin gallate, had enhanced permeability with the combination of these emulsifying agents.<sup>18</sup>



## PenSomal Cream

### Ingredient List *cont'd*

#### **Dimethicone**

Dimethicone is a form of silicone that is the most common in personal care formulas. As an emollient, dimethicone has properties that can effectively spread over the skin with a light, silky feel.<sup>19</sup>

#### **Glycerin**

Glycerin has an emollient effect and is used for its moisturizing properties in beauty products. It enhances skin permeation of different substances and is tolerable for the skin.<sup>20,21</sup> It acts as a humectant and with its ability to attract moisture, it helps support membrane fluidity.<sup>22</sup>

#### **Glycereth-26**

As a glyceryl ester, Glycereth-26 is used as a humectant, emollient, and thickening agent in personal care products.<sup>23</sup>

#### **Lecithin (and) Isopropyl Palmitate (and) Sorbic Acid (and) Potassium Sorbate**

These compounds are used to enhance the topical delivery of various drug treatments.<sup>24</sup>

#### **Magnesium Aluminum Silicate**

As a naturally occurring mineral, magnesium aluminum silicate is often used in personal care products as a thickener. It also aids the permeation of drug treatments.<sup>25</sup> It has also been combined with compounds to determine the permeability for controlled-release therapies.<sup>26</sup>

#### **Mica**

Mica is a mineral that is used in cosmetics to reflect light. It has been shown to have a smooth surface that is demonstrated to have adsorbed polymer chains.<sup>27</sup>

#### **Mineral Oil**

Mineral oil is a byproduct of petroleum distillation and is often used in personal care products as a light-weight moisturizer to enhance skin softness and retain moisture.<sup>28,29</sup>

#### **Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Propylparaben (and) Isobutylparaben**

These nanostructured lipid carriers have been shown to enhance the properties of various creams to improve skin hydration.<sup>30</sup> Researchers found that hydration improved when these parabens were added to topical skin creams.<sup>31</sup>



# PenSomal Cream

## Ingredient List *cont'd*

### **Poloxamer 407**

Poloxamer 407 is a gel polymer that is used as an emulsifier in topical treatments. In combination with a penetration enhancer, Poloxamer 407 was shown to enhance permeation of drug therapies.<sup>32</sup>

### **Titanium Dioxide**

Titanium Dioxide is an opaque naturally-occurring substance used for whitening, thickening, and UV protection in makeup, skin and personal care products. It penetrates the skin more easily when combined with an oily dispersion when compared to an aqueous dispersion.<sup>33</sup>

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