

## Enhanced Self Tanning Mousse for Pump

A self tanning mousse which results in a natural looking tan.



### INSIDE THE FORMULATION

#### ERYTHRULOSE

Erythrulose is a natural keto-sugar which reacts with free primary or secondary amino groups (Maillard's reaction). This reaction with amino acids of keratin in the skin leads to the DHA-driven formation of brownish polymers, the so-called melanoids. Erythrulose has been developed to reduce or even eliminate the disadvantages of the presently available self-tanners and works best in combination with DHA.

#### DIHYDROXYACETONE

DHA reacts with protein on the skin to produce a colour similar to the skin's natural pigmentation. DHA is the most widely used sunless tanner and needs to be formulated with care to prevent degradation of the DHA in the product.

#### PLEXAJEL ASC

A unique polymeric complex that is stable in low pH environments. It confers excellent moisturisation and skin feel in these systems, which would otherwise be difficult to achieve.

#### BLANOVA EDG

Ethoxydiglycol has excellent plasticising and solubilising characteristics. It is also used in pharmaceutical and cosmetic applications as a penetrating agent. In self-tanning formulations, it enables the actives to penetrate into the upper layers of the skin, producing a deeper and more long-lasting tan than could otherwise be achieved.

### WHAT WE FOUND ALONG THE WAY

Plexajel ASC was found to also produce a firmer foam for ease of application.

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RAW MATERIAL	% W/W	COMPOSITION	SUPPLIER
<b>Phase A</b>			
Deionised Water	77.99	Aqua	Guardian / S Black Group
Plexajel ASC	10.00	Aqua, Glycerin, Polyacrylimidomethylpropane Sulfonate, Polyquaternium-4, Phenoxyethanol	
<b>Phase B</b>			
Paratexin FPX	1.00	Phenoxyethanol, Methylparaben, Ethylparaben, Butylparaben, Propylparaben, Isobutylparaben	S Black Group
Dihydroxyacetone	3.50	Dihydroxyacetone	Merck / S Black Group
Erythulose	1.50	Erythulose, Aqua	Pentapharm / S Black Group
Blanova EDG	5.00	Ethoxydiglycol	S Black Group
EMAL 228 D/JM	1.00	Sodium Laureth Sulfate	Kao / S Black Ltd
<b>Phase C</b>			
Citric Acid 25% Solution	0.01	Citric Acid, Aqua	

### Mixing Instructions

Premix phase A until homogenous.  
Add phase B to phase A in order, mixing until homogenous.  
Adjust the pH using phase C as necessary.

Formulation developed by S Black

### Specification

pH Min: 3.50 : Max: 4.00  
Stability Testing 3 months @ 4, 20, 37°C and Cycle

Disclaimer:

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