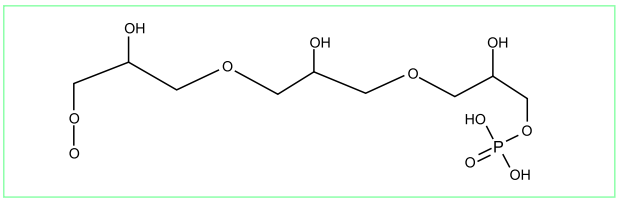
Prolix SB2

Function: Peg free O/W emulsifying system from vegetal origin, studied for fluid systems.
INCI name: Polyglyceryl-3 - Oleyl Ether Phosphate
REACh status: Polymer *

PROLIX SB 2 more than just an emulsifier, it can be defined as a “hydrophilic lipid” capable of forming particularly fresh and light O/W fluid emulsions, with a particular pleasant “velvety” effect. At room temperature it exists in the form of an oily liquid, clear, amber-coloured and with slight odour.



It is soluble in vegetable oils, fatty alcohols, fatty acids and their esters and is miscible in mineral oils, proving to be compatible with substances that vary in nature and polarity. It proves to be effective even when used in low percentages, allowing the formulation of hyperfluid emulsions suitable for the imbibition of the wipes; a percentage of 2-5% is sufficient to emulsify, even with the “cold-mix” technique, over 15% of oils and other lipophilic ingredients. With PROLIX SB 2, stable and easily dilutable emulsions can be obtained which moisturize, soothe and bestow a pleasant light and silky feeling even in the presence of high quantities of oily substances.

PROLIX SB2 is a product derived from renewable raw materials.

- POLYGLYCERYN-3 OBTAINED FROM VEGETAL GLYCERIN
- OLEYL ALCOHOL OF VEGETAL ORIGIN

Thanks to its original structure, is aligned with the new generation of eco-products created by PRO+

The emulsiological action of the new emulsifier is based on the concept that in order to achieve the stability of a system, the hydrophilic grade relative to the lipids used in the emulsion, and therefore the factor of polarity (i.e. the HLB required), are less important components with respect to the presence of a reticulating system. Besides the addition of a lipophilic emulsifier (HLB theory and Schulman's couple theory), the stabilizing of an emulsion can be ensured by the presence of a liquid crystal system or by the formation of a reticular network.

PROLIX SB2, as well as representing a new system for the formulation of products for the imbibition of wipes, optimizes the production process. It favors the step of emulsification even at low temperature, distributes perfectly the components of the oily phase without foaming and allows to obtain a product easily absorbable in the "nonwoven tissue".

(*) Producers of polymers are not obliged to register them, but must register the monomers from which they are composed, if not already registered, and only where they exceed 2% in weight.

EXAMPLE FORMULAS

Gentle Eye & Face Make-Up Remover Emulsion

Phase 1	**Prolix SB2** (Polyglyceryl-3 Oleyl Ether Phosphate)	0.30
	Phenoxyethanol (and) Ethylexylglycerin	0.20
	Prunus Amygdalus Dulcis Oil	0.06
	Dicaprylyl Carbonate	0.05
	Parfum	0.05
	Tocopheryl Acetate	0.05
Phase 2	Aqua	at 100.00
	Propylene Glycol	0.10
	Xanthan Gum	0.08
	Tetrasodium EDTA	0.05

Preparation Method

** Combine the Phase 1 to Phase 2, better if heated to 35° C, under fast stirring. It can work even in 'cold processing' if you have a suitable device turboemulsifier. The pH of the emulsion can be easily arranged with the normal cosmetic ingredients (citric acid or sodium hydroxide for example).*

Moisturizing Emulsion

Phase 1	**Prolix SB2** (Polyglyceryl-3 Oleyl Ether Phosphate)	0.70
	Dicaprylyl Carbonate	0.50
	Caprylic/Capric Triglyceride	0.50
	Dimethicone	0.30
	Parfum	0.10
	Tocopheryl Acetate	0.10
Phase 2	Aqua	at 100.00
	Glycerin	1.00
	Water (and) Sodium Benzoate (and) Potassium Sorbate	0.70
	Zemea Propanediol	0.50
	Lauryl Glucoside	0.30
	Xanthan Gum	0.08
	Tetrasodium EDTA	0.05

* Preparation Method

Base Emulsion

Phase 1	**Prolix SB2** (Polyglyceryl-3 Oleyl Ether Phosphate)	0.70
	Phenoxyethanol (and) Ethylexylglycerin	1.00
	C12-13 Alkyl Benzoate	0.50
	Coco-Caprylate	0.50
	Parfum	0.30
	Tocopheryl Acetate	0.10
		0.10
Phase 2	Aqua	
	Glycerin	at 100.0
	Decyl Glucoside	01.00
	Xanthan Gum	0.30
	Tetrasodium EDTA	0.08
		0.05

* Preparation Method

Soothing Emulsion

Phase 1	**Prolix SB2** (Polyglyceryl-3 Oleyl Ether Phosphate)	0.30
	Prunus Amygdalus Dulcis Oil	0.05
	Bisabolol	0.05
	Rice Bran Oil	0.07
	Parfum	0.05
	Tocopheryl Acetate	0.05
Phase 2	Aqua	at 100.00
	Polyglyceryl-3 PCA	0.10
	Water (and) Sodium Benzoate (and) Potassium Sorbate	0.20
	Xanthan Gum	0.08
	Tetrasodium EDTA	0.05

* Preparation Method

INTRODUCTION

The widespread use of nonwoven wipes is rather recent; their origins can be traced back to ancient customs, widespread in Asian countries such as Japan in particular, of using hot soaked cloths to clean the hands and face during meals. This use rapidly became widespread even in western countries giving rise to the creation of machines which could produce a practical product with infinite possiblities for usage. In the 1980s the first machines from Japan were installed in Europe and the USA.

The first big commercial breakthrough was achieved by refreshing wipes and wipes for waterless cleansing of the body, followed by the even greater success of baby wipes, moistened wipes for cleaning babies in nappies: products which rapidly became diffused all over the world and which are now considered indispensable. The “wet wipe” then led to even more specific cosmetic formulations or products geared towards specific sectors from industrial and domestic detergents to food preparation (cleaning and disinfecting of various surfaces) to healthcare uses (wipes saturated in medicinal solutions containing active principles). In effect, the product's intrinsic characteristics (simple support, practical to use and transport, low cost) give the possibilty for any use immaginable; scrolling through the titles of numerous recent patents in the area of “wipes”, we can see how fast the range of products currently available is, and the much higher level of potential for the development of pre-moistened tissues.

In recent years, the wipes industry in italy has steadily enjoyed a gradual increase. It has seen the arrival of new brands which have made it more dynamic and competitive, greatly increasing new opporunities and solutions.

Year	Euro	Increase
2007	132.000.000	
2008	140.000.000	+ 6.0%
2009	142.000.000	+ 1.5%
2010	154.000.000	+ 8.4%
2011	161.000.000	+ 4.6%
2012	173.000.000	+ 7,5%

It must be underlined that the growth between 2007 and 2012 was that of 28%.

THE MATERIALS

Out of respect for the environment, the cosmetics industry is paying increasingly more attention to the usage of raw materials from renewable resources. Regarding the production of moistened wipes, PROGRESSUS, which is particularly attentive to the evolution of the cosmetics industry, has put forward an innovative product which is capable of performing in line with market trends.

An emulsified system permits the simultaneous use of oil soluble and water soluble ingredients, easy to measure out in the concentration desired. Furthermore, it has the advantage of being able to take on a suitable appearance and consistency for an easy and even distribution on the surface to be treated. Finally, considering the structure of the cellular membranes, an emulsified system proves to be the best “carrier” for active principles and functional substances.

A suitable way to cleanse and eliminate skin impurities is to use an O/W emulsion, the classic “cleansing milk”. In this case, the water phase containing the tensioactive breaks down the dirt and water soluble impurities of the skin, while the “droplets” of the oil phase dispersed in water, tend to incorporate the liposoluble “dirt”. Unlike in normal cleansing which is entrusted to a strongly hydrophilic tensioactive, a conveniently formulated emulsion cleanses without altering the hydrolipidic balance present in the epidermis.