



# **BELGUARD EHG PE**

## **PRODUCT DESCRIPTION**

BELGUARD EHG PE is a combination of Phenoxyethanol and Ethylhexyl Glycerine in the weight ratio of 90:10 respectively.

It is a Paraben free alternative to traditional preservative. A reliable biodegradable innovative preservative that offers a broad balanced spectrum effect on bacteria, yeast and mould fungi. The addition of EHG affects the interfacial tension at the cell membrane of microorganisms, enhancing the preservative activity of Phenoxyethanol.

The blend is suitable for Leave on and Rinse off cosmetic formulations. It is not animal sourced, is gluten free and bio-degradable.

## **MICROBIOLOGICAL ACTIVITY**

Belguard EHG PE is broad spectrum preservative and effective against gram-positive, gram-negative, yeast and mould fungi. We are tabulating below the minimum inhibitory concentration of few organisms which were carried out for 72 hours at various concentrations.

## **ADVANTAGES OF BELGUARD EHG PE**

- Excellent solubility and easily dispersed even at low concentration.
- Present stable characteristic to temperature.
- Effective in the pH range 3 - 12.
- It is a good wetting agent.
- The use of Phenoxyethanol alone as a preservative in cosmetic formulation caused serious non- reversible injuries to cell (sometimes caused death of cell microbes). The EHG is used as a potentiating agent to nullify the effect of Phenoxyethanol and at the same time enhance the inhibition of growth greater than 5 log reduction within a span 30 minutes in case of gram-negative bacteria, for example E. Coli.
- The traditional preservatives like Methyl isothiazolinones and Chloromethyl isothiazolinones exhibited skin allergy and hence Phenoxyethanol in combination with Ethylhexyl glycerine have found to be effective and safe in cosmetic formulations.
- The use of Ethylhexyl glycerine enhances the preservative effect of Phenoxyethanol and acts as a wetting agent.

## **BELCHEM INDUSTRIES (INDIA) PVT. LTD.**

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**CIN No: U99999MH1986PTC038883 . A GOVT. RECOGNISED EXPORT HOUSE.**





## SOLUBILITY DATA OF BELGUARD EHG PE (1% W/W AT 25° C)

Solvent	Concentration in Percentage
Water	Approximately 1%
Ethyl alcohol	Copiously Soluble
Glycols	Freely Soluble

## COMPOSITION

Product Name	BELGUARD EHG PE
CAS No.	Phenoxyethanol -122-99-6 and Ethylhexyl Glycerine - 70445-33-9
EINECS No.	204 -589 -7 ; 408 -08 -02
Synonyms	Euxyl PE 9010

## TECHNICAL DATA

Description	Parameter
Appearance	Clear Colourless liquid
Odour	Mild Characteristic
Colour Index (APHA)	Max. 50
Relative Density @200C	1.087 - 1.0923
Refractive Index @200C	1.522 - 1.534
% Ethylhexylglycerine w/w	8.5 - 11.5
% Phenoxyethanol w/w	88.5 - 91.5
Free Phenol	Max. 10 ppm

## CONCENTRATION

The recommended concentration for various formulations range from 0.5 - 1.0%.

## STORAGE

Store in original container at room temperature.

## EXPIRY DATE

2 years from the date of manufacturing.

## PACKAGING

250 kg, 35 kg HDPE Drum or HDPE Carboy.

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