

Iscaguard EHG

Paraben Free	Thiazolinone Free	Formaldehyde Free	Preservative Free	Natural
✓	✓	✓	✓	✗

INCI declaration
Ethylhexylglycerin

Iscaguard EHG is a multifunctional additive that has historically been used as an emollient and skin conditioning agent. Its preservative boosting effects have led to a rise in its popularity, particularly in deodorising and sensitive skin applications. Although as a stand-alone additive Iscaguard EHG has low activity against microbial growth, combination with active biocides has been proven to increase their efficacy, thereby allowing lower preservative concentrations for safer, gentler formulations.

In Use Concentrations	ISCA recommendation	EU Cosmetic Regulation (max)
Leave-on	0.3 – 1.0 %	Not regulated (Annex V)
Rinse-off	0.3 – 1.0 %	Not regulated (Annex V)

In use concentrations vary according to the formulation type and other ingredients present. The correct use dosage should be determined by microbial challenge testing of the finished formulation (ISCA UK offers discounted challenge testing to our customers).

Recommended Applications

Shampoo, Shower gel (Rinse-off)	Creams, lotions (Leave-on)	O/W emulsions	W/O emulsions	Wet wipes	Eye care	Lip care	Oral care	Children under 3
•	•	•	•	•	•	•	•	•

Use scenarios derived from evaluation of Cosmetic Regulation guidelines and preservative performance for typical formulations.

Formulation guidelines	
pH (effective range)	3 – 12
Solubility (Water)	< 0.5 %
Solubility (Glycols)	Soluble
Maximum Process Temperature	80 °C
General information	Iscaguard EHG is compatible with most commonly used personal care ingredients. It has limited solubility in water, but is freely soluble in alcohols and glycols.

Minimum Inhibitory Concentrations		
Microorganism	MIC (%)	
	PE	PE-EHG
Bacteria (gram-negative)		
Pseudomonas aeruginosa	0.4	0.4
Escherichia coli	0.4	0.4
Bacteria (gram-positive)		
Staphylococcus aureus	0.5	0.4
MRSA	0.5	0.4

Minimum Inhibitory Concentrations		
Microorganism	MIC (%)	
	PE	PE-EHG
Yeasts		
Candida albicans	0.5	0.25
Candida famata	0.5	0.25
Moulds		
Aspergillus niger	0.5	0.25

PE – Phenoxyethanol (Iscaguard PE) PE-EHG – Phenoxyethanol, Ethylhexylglycerin (Iscaguard PEHG)


Physical Properties (approximate)	
Synonym	3-(2-ethylhexyloxy)propane-1,2-Diol
CAS Number	70445-33-9
ELINCS Number	408-080-2
Molecular formula	C ₁₁ H ₂₄ O ₃
Molecular weight	204.31
Purity	> 99 %
Appearance	Clear colourless liquid

Physical Properties (approximate)	
Odour	Low or no odour
Density	0.95 gcm ⁻³
Boiling point	> 285 °C
Flash point	152 °C
Refractive index	1.451
Viscosity	145 mPa S
Solubility in water	0.1 - 0.2 %

Safety information

Cosmetic Regulation labelling requirements
No special labelling requirements.

Transport information	
	not regulated
UN number	-
UN proper shipping name	-
Transport hazard class	-
Packing group	-
Environmental hazards	-

Hazard classification/labelling	
Hazard pictograms	
Signal word	Danger
Hazard statements	Causes serious eye damage. Harmful to aquatic life with long lasting effects.