

Aquaguard NK12

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

INCI declaration
Aqua, Sodium Benzoate, Potassium Sorbate

Aquaguard NK12 is an aqueous preservative suitable for use with both rinse-off and leave-on products. It has a broad spectrum of activity and is effective against bacteria, yeast, mould and fungi. The preservative is supplied as an easy to use, readily dispersible liquid which is alcohol and solvent free. Aquaguard NK12 is designed for use in skin friendly formulations with pH values up to 5.5.

In Use Concentrations	ISCA recommendation	EU Cosmetic Regulation (max)
Leave-on	1.0 – 1.9 %	1.96 %
Rinse-off	1.0 – 3.0 %	5.35 %

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)	2.0 – 5.5
Solubility (Water)	Fully soluble
Solubility (Glycols)	Fully soluble
Maximum Process Temperature	80 °C (avoid prolonged periods at high temperature)
General information	Aquaguard NK12 is compatible with most personal care ingredients. It is suitable for use in low pH formulations, but will lose efficacy if the pH rises above 5.5. The product as supplied may change in appearance from yellow to brown on storage, but no further discolouration occurs when it is used in the end product as long as the formulation remains acidic.

Minimum Inhibitory Concentrations	
Microorganism	MIC (%)
Bacteria (gram-negative)	
Pseudomonas aeruginosa	0.60
Escherichia coli	0.20
Bacteria (gram-positive)	
Staphylococcus aureus	0.30
Enterococcus hirae	0.30
Bacillus subtilis	0.05
MRSA	0.02

Minimum Inhibitory Concentrations	
Microorganism	MIC (%)
Yeasts	
Candida albicans	0.50
Saccharomyce cerevisiae	0.05
Saccharomyces rouxii	0.15
Rhodotolura sp	0.05
Moulds	
Penicillium funiculosum	0.05


Physical Properties (approximate)	
Appearance	Clear yellow to brown liquid
Odour	Mild odour
Density	1.176 gcm ⁻³
pH value	7.5 - 10.0

Physical Properties (approximate)	
Solubility in water	Fully soluble
Solubility in glycols	Fully soluble
VOC content	0 %

Safety information

Cosmetic Regulation labelling requirements
No special labelling requirements.

Transport information	
	IMDG
UN number	-
UN proper shipping name	Not dangerous goods
Transport hazard class	-
Packing group	-
Environmental hazards	-

Hazard classification/labelling	
Hazard pictograms	
Signal word	Warning
Hazard statements	H315 Causes skin irritation. H319 Causes serious eye irritation.



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The information contained herein is, to the best of our knowledge, true and accurate. Any recommendations or suggestions are made without warranty or guarantee as the conditions of use are beyond our control. We strongly recommend that all products containing IscaGuard are rigorously tested to ensure suitability for end-use.

