

euxyl[®] K 320

Preservative for cosmetics & toiletries

- Broad, balanced spectrum of effect against bacteria, yeasts and moulds
- Good head space protection
- Suitable for leave-on and rinse-off products

Use / Use-concentration	acc. schülke-recommendation	acc. EU / ASEAN Cosmetics Directive	acc. CIR (USA)
Leave-on (i.e. creams, lotions etc.)	0.5 - 1.4 %	max. 1.4 %	max. 2.66 %
Rinse-off (i.e. shampoos, bath preparations etc.)	0.5 - 1.4 %	max. 1.4 %	max. 2.66 %

Recommended use-concentrations are based on average active content. Please pay attention to the corresponding certificate of analysis.

EU-INCI-declaration

Phenoxyethanol
Methylparaben
Ethylparaben
Propylene Glycol

US-INCI-declaration

Phenoxyethanol
Methylparaben
Ethylparaben
Propylene Glycol

Active substance	EINECS-Name:	CAS-No.:	EC-No.:
Phenoxyethanol	2-Phenoxyethanol	122-99-6	204-589-7
Methylparaben	Methyl 4-hydroxybenzoate	99-76-3	202-785-7
Ethylparaben	Ethyl-4-hydroxybenzoate	120-47-8	204-399-4

Physico-chemical properties

Colour	colourless
Form	Liquid
Odour	characteristic
Density (20 °C)	1.117 - 1.127 g/ml
Refractive index (20 °C)	1.531 - 1.539
initial boiling point	> 180 °C
Flash point (ISO 2719)	> 100 °C
Flow time (DIN 53211 -)	< 20 s
Water solubility (20 °C)	ca. 8 g/l
Foaming characteristics (DIN 53902)	Non foaming (0.2 % in water)

Fields of application

The recommended use levels relate to the total formulation in each case. The values given are recommended guidelines. The optimum use level should be evaluated by means of a repeated challenge test (e.g. at schülke Technical and Microbiological dept).

	Recommended dosage
Emulsions	0.5 - 1.4 %
Solutions (e.g. shampoos, bath preparations and hand cleansing preparations)	0.5 - 1.4 %
Wet wipes	0.5 - 1.4 %
Other uses	Kindly contact us.

Indications for use

General Information	euxyl [®] K 320 is fully effective both in anionic as well as cationic systems. Acidic pH values have no negative influence on the effectiveness. High pH values (> pH 8.0) should be avoided.
Solubility	In water and non-polar solvents only limitedly soluble. To dissolve euxyl [®] K 320 in water, an agitator with good turbulence is necessary.
Compatibility with surfactants	euxyl [®] K 320 proved to have good chemical compatibility with anionic surfactants such as sulphates, ether sulphates and sulposuccinates, as well as with non-ionogenic surfactants. Ethoxylated surfactants may lead to loss of effectiveness.
Compatibility with sulphite ions	euxyl [®] K 320 exhibits no interaction with sulphite ions.
Maximum use temperature	max. 80 °C

euxyl® K 320

Microbiological efficacy

euxyl® K 320 is equally effective against bacteria, yeasts and mould fungi. It is a typically biostatic product with the biocidal properties necessary for practical use. For euxyl® K 320 to perform effectively in destroying organisms in products already contaminated, a minimum contact time of 48 hours is necessary. Since the effect of euxyl® K 320 takes place through chemical reactions with the microorganisms, when it is used in heavily contaminated products loss of active ingredient must be taken into account. Good production hygiene, as well as the use of raw materials with low microorganism levels as a result of correct raw material control, are of course vital prerequisites for the production of microbiologically faultless finished products.

MIC

The efficacy of the product has been tested against the following microorganisms according to DGHM (German Society for Hygiene and Microbiology). Determination of the minimum inhibitory concentration in the serial dilution test produced the following values (MIC in % of the product):

Bacteria (gram-negative)	MIC	Bacteria (gram-positive)	MIC	Yeasts	MIC
<i>Escherichia coli</i>	0.25	<i>Staphylococcus aureus</i>	0.50	<i>Candida albicans</i>	0.75
<i>Klebsiella pneumoniae</i>	0.25			Moulds	MIC
<i>Pseudomonas aeruginosa</i>	0.75			<i>Aspergillus niger</i>	0.25
<i>Pseudomonas fluorescens</i>	0.50			<i>Penicillium funiculosum</i>	0.125
<i>Pseudomonas putida</i>	0.50				

Compatibility*

	compatible	to be avoided
concentrate	steel, brass, copper, zinc, aluminium, polyethylene, PVC (hard), chloroprene rubber, natural rubber, styrene butadiene rubber, polytetrafluoroethylene	polycarbonate, polymethyl methacrylate (PMMA), acrylo-nitrile butadiene styrene polymer (ABS)
aqueous dilution (0.2 %)	No significant difference to water	Water incompatible materials

*Compatibility has to be proved in each case

Environmental information

euxyl® K 320 contains only biodegradable components. Dilutions of euxyl® K 320 do not normally interfere with the operation of waste water treatment plants. The canisters and drums used by schülke are made of polyethylene (HDPE) and are labelled accordingly. The 1000 kg containers are covered by a return scheme that ensures collection of the used containers free of charge and appropriate reuse all over Europe. The labels are made of PE. schülke packaging materials contain no PVC and can be recycled. For further information please ask for our detailed environmental report.

Labelling

R-phrases(s)	R22, R36
S-phrases(s)	S26
Labelling	Xn (Harmful)

Transport & Storage

Dangerous goods	No
UN-Number	-
Packaging group	-
Package sizes	10 kg, 200 kg, 1000 kg
Shelf life	18 Months
Storage	Protect from heat and direct sunlight. Store at room temperature in the original container.

For further hazard instructions and safety advice please refer to the actual material safety data sheet.

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Our recommendations regarding our products are based on in-depth scientific testing in our Research Department; they are given in good faith, but no liability can be derived from them. It is the responsibility of the final product manufacturer to assure that claims made for the final product are in conformance with all applicable local laws. In other respect our Conditions of Sale and Supply apply.

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