

who protects the
high quality of
cosmetic products?

—
we do.



ashland.com / efficacy usability allure integrity profitability™

we protect the high quality cosmetic products

Today's consumer are rightfully demanding when it comes to choosing their preferred personal care products. Selecting the right ingredients that deliver an effective level of protection against bacteria, yeast, and mold; bringing along no legal drawbacks can be the ultimate challenge at present. At Ashland, we are passionate and tenacious solvers who thrive on developing practical, innovative, and elegant solutions in personal care formulations provides all the help needed to select the right antimicrobial.

Ashland's family of antimicrobials offers a variety of solutions for personal care products. Designed to effectively protect and to help manufacturers comply with regulatory requirements. With every product our global team of solvers supports you with extensive technical lab service, in-depth microbiological expertise and application know-how.

For country-specific availability please check ashland.com or contact your local sales representative.

Use our intuitive antimicrobial selector tool to find the perfect solution for your needs. The dynamic criteria help you to select from a wide range of technologies, and the news section keeps you tuned into latest trends.

Visit ashland.com/antimicrobalselector to learn more.

available in five categories

multifunctionals.....	4-6
deodorant actives..	8-9
natural antimicrobials.....	10-13
classic preservatives.....	14-17
progressive preservatives.....	18-21



biodegradable

Has attained a sufficient level of biodegradation that meets the requirements for 'ready' or 'inherent' according to OECD or related methods such as, 301, 302, or 306, or product has been assessed as being biodegradable based on a read-across to a chemical with similar structure or the product components have been analyzed for biodegradation potential.



natural

meets ISO 16128-2:2017 100% natural origin content standard



nature-derived

meets ISO 16128-2:2017 50% - 99% natural origin content standard

who is the safety belt for
personal care products?

—
we are.





multifunctionals

Multifunctional ingredients comprise various families that are classed as diols, ethers, or esters. Widely used in skin care, hair care, wet wipes, toiletries and color cosmetics, multifunctional ingredients provide moisturizing and solubilizing properties. With a wide pH tolerance they are suitable for many personal care applications.



multifunctionals																		
trade name ¹	INCI name	recommended use - concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
sensiva™ sc 10 multifunctional	Ethylhexylglycerin (and) Caprylyl Glycol	0.5% - 2.0%	+++	+	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> multifunctional ingredient boosted by ethylhexylglycerin booster for antimicrobials provides moisturizing and emolliency ideal for leave-on formulations 	no restrictions for the use in cosmetics	max. 6.66% (leave on) max. 7.14% (rinse-off)	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			
sensiva™ sc 50 multifunctional	Ethylhexylglycerin	0.3% - 1.0%	+++	+	+++	≤12	120°C			<ul style="list-style-type: none"> market-leading multifunctional ingredient skin care additive and emollient booster for antimicrobials boosting and fixing of fragrance ingredients effective against odor-causing bacteria ideal for all leave-on formulations 	no restrictions for the use in cosmetics	max. 2.0% (leave on) max. 8.0% (rinse-off)	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			
sensiva™ sc 80 multifunctional	Propanediol (and) Caprylyl Glycol (and) Caprylhydroxamic Acid	0.3% - 1.5%	+++	+++	+++	≤8	80°C	x	x	<ul style="list-style-type: none"> well-balanced blend of multifunctional ingredients strong fungicidal efficacy provides antioxidant and well-aging benefits designed for challenging leave-on formulations, e.g. sun care not available in the US 	no restrictions for the use in cosmetics	max. 5.0% (leave on) max. 6.0% (rinse-off)	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			 64%
optiphen™ od multifunctional	Caprylyl Glycol	0.3% - 2.0%	+++	++	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency ideal for all leave-on formulations 	no restrictions for the use in cosmetics	max. 5.00%	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			
effisin™ hd multifunctional	1,2-Hexanediol	0.5% - 3.0%	+++	++	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency ideal for all face care formulations 	no restrictions for the use in cosmetics	safe as used	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			
effisin™ pg multifunctional	Pentylene Glycol	1.0% - 5.0%	++	++	++	≤12	120°C	x	x	<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency ideal for face care formulations 	no restrictions for the use in cosmetics	safe as used	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			

+++ highly recommended, ++ recommended, + suitable, - not recommended

1) Subject to name changes. 2) ASEAN: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. 3) Mercosur: Argentina, Brazil, Paraguay, Uruguay

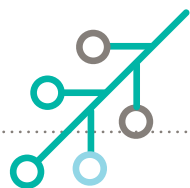
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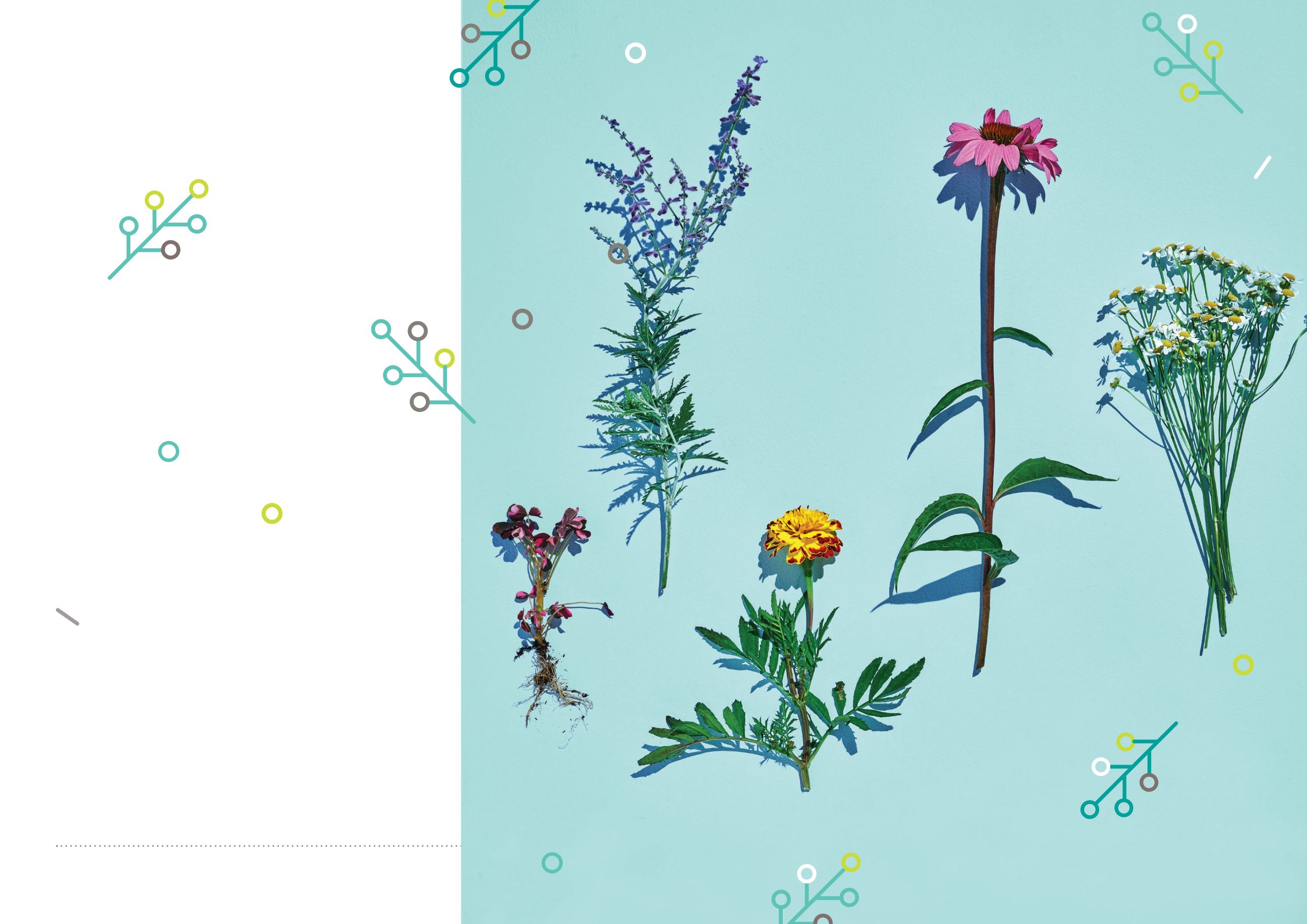
multifunctionals

trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
sensiva™ pa 20 multifunctional	Phenethyl Alcohol (and) Ethylhexylglycerin (and) Tocopherol	0.5% - 1.1%	+++	+	++	≤12	80°C	x	x	<ul style="list-style-type: none"> multifunctional blend boosted by ethylhexylglycerin appealing rose-like odor ideal for leave-on formulations 	no restrictions for the use in cosmetics	max. 1.11%	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	max. 1.11%			
sensiva™ pa 30 multifunctional	Propanediol (and) Phenethyl Alcohol (and) Undecyl Alcohol (and) Tocopherol	1.0% - 2.0%	+++	+++	++	≤12	80°C	x	x	<ul style="list-style-type: none"> multifunctional blend boosted by undecyl alcohol appealing rose-like odor ideal for neutral rinse-off formulations 	no restrictions for the use in cosmetics	max. 2.85%	no restrictions for the use in cosmetics	-	max. 2.85%			 50%
sensiva™ pa 40 multifunctional	Phenylpropanol (and) Propanediol (and) Caprylyl Glycol (and) Tocopherol	0.5% - 1.5%	+++	++	++	≤12	120°C	x	x	<ul style="list-style-type: none"> powerful multifunctional blend boosted by caprylyl glycol provides moisturizing and emolliency appealing floral scent designed for challenging leave-on formulations, e.g. sun care 	no restrictions for the use in cosmetics	safe as used	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			30%
phyteq™ raspberry i multifunctional	Raspberry Ketone	0.3% - 1.0%	+++	++	++	≤8	80°C	x	x	<ul style="list-style-type: none"> strong antioxidant and free radical scavenger benefits improves skin biology - anti-inflammation claim ex vivo ideal for leave-on formulations 	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			
phyteq™ raspberry one multifunctional	Phenylpropanol (and) Propanediol (and) Raspberry Ketone	0.5% - 2.0%	+++	++	++	≤8	80 °C	x	x	<ul style="list-style-type: none"> innovative liquid blend of multifunctional ingredients with strong fungicidal efficacy perfect choice for difficult to preserve leave-on formulations such as sunscreens and pigmented emulsions extensive skin benefits including remarkable antioxidant and well-aging properties 	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			37%

+++ highly recommended, ++ recommended, + suitable, - not recommended

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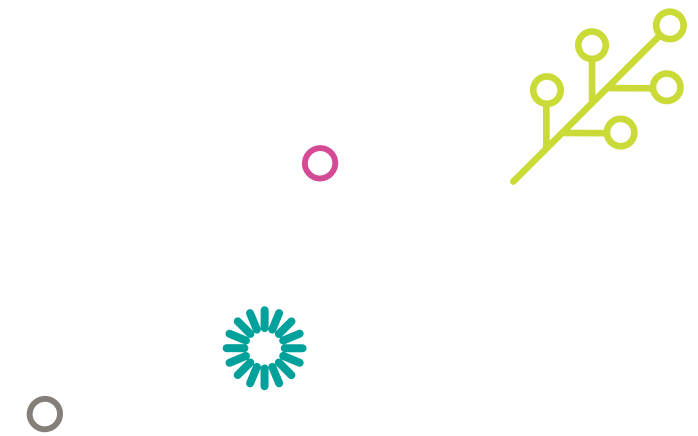








deodorant actives

The development and evaporation of sweat can be an important mechanism for body temperature control or even be a crucial human survival strategy. And yet we all know that sweat can occur at most inappropriate moments even causing very unpleasant smell. This is because the axilla is a good breeding ground for bacteria that transform originally odorless sweat into volatile components generating an unwanted odor. **sensidin™ pure skin multifunctional**, **sensidin™ do skin multifunctional** and **sensiva™ sc 50 multifunctional** are effective deodorant actives that inhibit the growth and multiplication of odor-causing bacteria while being gentle to the skin.

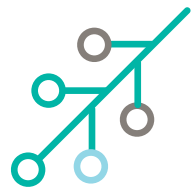


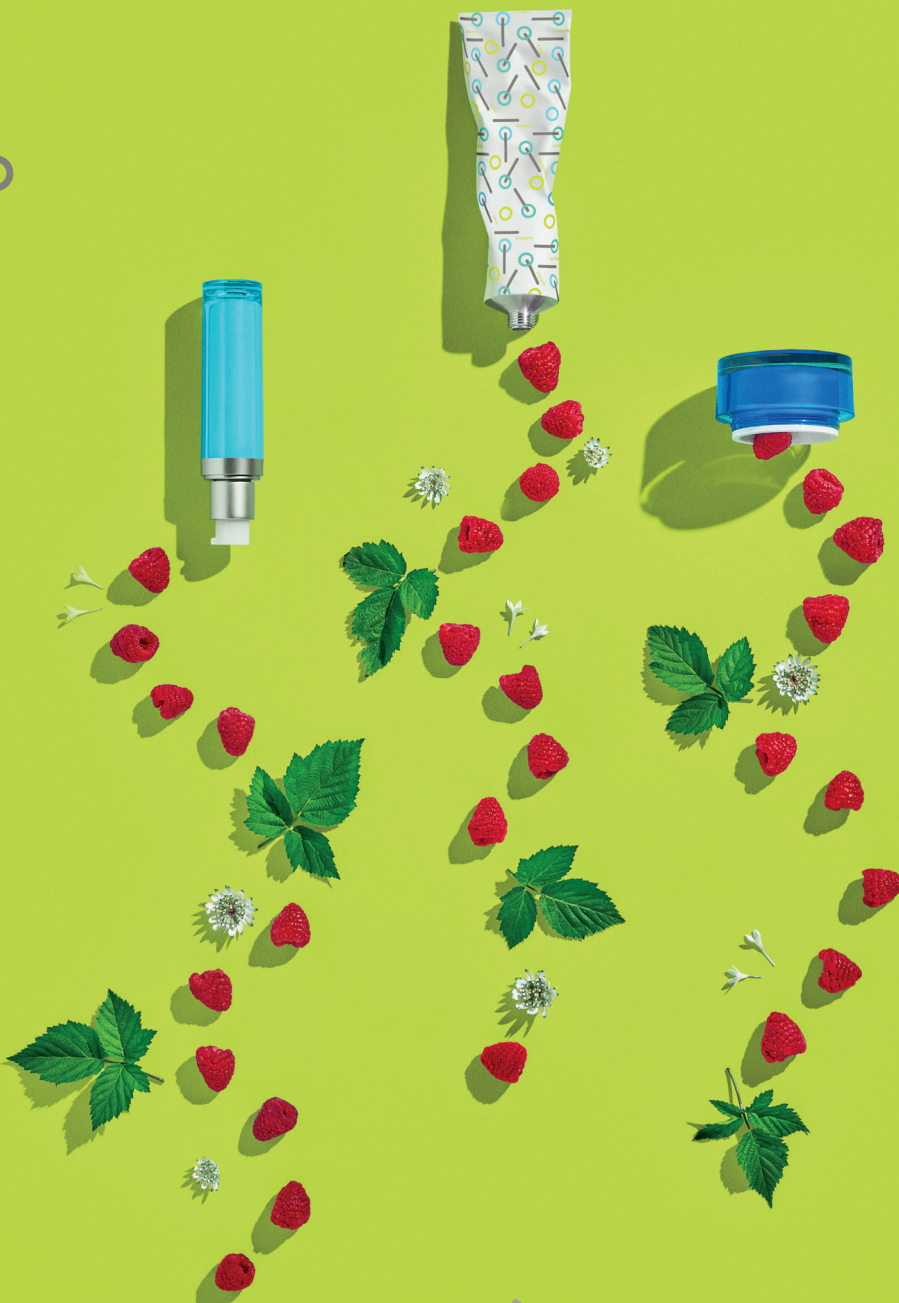
deodorant actives

trade name ¹	INCI name	recommended use - concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
sensiva™ sc 50 multifunctional	Ethylhexylglycerin	0.3% - 1.0%	+++	+	+++	≤12	120°C	x		<ul style="list-style-type: none"> market-leading deodorant ingredient booster for antimicrobials boosting and fixing of fragrance ingredients ideal for all deodorant formulations 	no restrictions for the use in cosmetics	max. 2.0% (leave on) max. 8.0% (rinse-off)	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			
sensidin™ do skin multifunctional	Propylene Glycol (and) Ethylhexylglycerin (and) Octenidine HCl	0.5% - 1.0%	+++	+	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> well-known blend of deodorant ingredients contains powerful octenidine deodorant protection for 24 hours gentle to the skin ideal for roll-on, spray, and areosol deodorants 	no restrictions for the use in cosmetics	safe as used	no restrictions for the use in cosmetics	-	no restrictions for the use in cosmetics			
sensidin™ pure skin multifunctional	Propanediol (and) Octenidine HCl	0.03 - 0.3%	+++	+	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> trendsetting skin multifunctional very strong and fast efficacy on all body regions long-lasting deodorant protection for 48 hours respects the individual microbiome hypoallergenic ideal for roll-on, spray, and aerosol formulations contains powerful octenidine 	no restrictions for the use in cosmetics	safe as used	no restrictions for the use in cosmetics	-	no restrictions for the use in cosmetics			70%

+++ highly recommended, ++ recommended, + suitable, - not recommended

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naturals

At Ashland, we believe sustainability is vital to our planet for the health and wellbeing of future generations. Natural and biodegradable ingredients thereby play an imperative role. We support consumers in making ethical choices, reducing environmental footprint, and enhancing the quality of life within our communities while ensuring the long-term sustainability of personal care products.

The natural movement continues to drive consumer buying habits, so it's no surprise that marketers also harbor a preference for all things green.

Sensiva™ go natural multifunctional is a 100% natural blend. Based on carefully selected ingredients, sensiva™ go natural multifunctional inheres full-spectrum antimicrobial efficacy while being gentle to the skin.

With effisin™ cg natural multifunctional and effisin™ pg natural multifunctional, Ashland offers the two most important 1,2-diols available on the market based on a 100% natural feedstock – antimicrobial efficacy, moisturizing, and skin benefits in one product.

Looking for a natural bactericide to boost performance? Then effisin™ la natural multifunctional is your cost-effective go-to product with COSMOS validation.

naturals																		
trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram-/gram-bacteria	yeast/mold									
phyleq™ raspberry n multifunctional	Raspberry Ketone	0.3% - 1.0%	+++	++	++	≤8	80°C	x	x	<ul style="list-style-type: none"> strong antioxidant and free radical scavenger benefits improves skin biology - anti-inflammation claim ex vivo ideal for natural formulations 	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			 100%
sensiva™ go natural multifunctional	Caprylyl Glycol (and) Glyceryl Caprylate (and) Propanediol	0.5% - 2.0%	+++	+	+++	≤7	80°C	x	x	<ul style="list-style-type: none"> natural multifunctional ingredients blend provides moisturizing, emolliency and re-fattening HRIPT tested: ideal for demanding skin designed for certified natural formulations: COSMOS validated 	no restrictions for the use in cosmetics	max. 5.00%	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			 100%
effisin™ cg natural multifunctional	Caprylyl Glycol	0.3% - 2.0%	+++	++	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> provides moisturizing and emolliency compares to synthetic caprylyl glycol ideal for certified natural formulations: COSMOS validated 	no restrictions for the use in cosmetics	max. 5.00%	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			 100%
effisin™ la natural multifunctional	Levulinic Acid (and) Aqua (Water)	max. 1.0%	++	++	++	≤5.5	80°C	x		<ul style="list-style-type: none"> good bactericidal efficacy cost-effective ready-to-process liquid ideal for certified natural formulations: COSMOS validated 	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			 100%
effisin™ pg natural multifunctional	Pentylene Glycol	1.0% - 5.0%	++	++	++	≤12	120°C	x	x	<ul style="list-style-type: none"> provides moisturizing and emolliency compares to synthetic pentylene glycol ideal for certified natural formulations: COSMOS validated perfect for transparent formulations booster for microbial protection systems 	no restrictions for the use in cosmetics	max. 5.00%	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics	no restrictions for the use in cosmetics			 100%
euxyl™ k 712 preservative	Sodium Benzoate (and) Potassium Sorbate (and) Aqua (Water)	0.5% - 1.5%	+++	+++	++	≤5.5	80°C max. 4 hours	x	x	<ul style="list-style-type: none"> market-leading organic acid blend cost-effective allrounder ideal for certified natural formulations: COSMOS & NaTrue compliant ready-to-process liquid 	max. 1.96% (leave-on) max. 5.35% (rinse-off)	max. 3.33%	max. 1.96% (leave-on) max. 5.35% (rinse-off)	max. 1.96%	max. 1.96% (leave-on) max. 5.35% (rinse-off)			 55%

+++ highly recommended, ++ recommended, + suitable, - not recommended

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naturals																		
trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
euxyl™ k 903 preservative	Benzyl Alcohol (and) Benzoic Acid (and) Dehydroacetic Acid (and) Tocopherol	0.4% - 1.2%	+++	+++	+++	≤6	80°C max. 4 hours	x	x	<ul style="list-style-type: none"> counterpart to market-leading euxyl™ k 703 preservative enhanced antifungal properties ideal for certified natural formulations: COSMOS & NaTrue compliant 	max. 1.23%	max. 3.70% (leave-on) max. 10.00% (rinse-off)	max. 1.23%	max. 1.23%	max. 1.23%	f		
optiphen™ bsb-n preservative (North America) rokonsal™ bsb-n preservative (Rest of World)	Benzyl Alcohol (and) Benzoic Acid (and) Sorbic Acid (and) Glycerin	0.3% - 1.0%	+++	+++	++	≤5.5	80°C max. 4 hours	x	x	<ul style="list-style-type: none"> organic acid blend enhanced by benzyl alcohol contains natural glycerin for improved moisturizing enhanced antifungal properties ideal for certified natural formulations: COSMOS & NaTrue validated 	max. 2.50%	max. 7.50% (leave-on) max. 25.00% (rinse-off)	max. 2.50%	max. 2.50%	max. 2.50%			40%
optiphen™ bsb-w preservative	Benzyl Alcohol (and) Sodium Benzoate (and) Potassium Sorbate (and) Aqua (Water)	0.3% - 1.0%	+++	+++	++	≤5.5	80°C max. 4 hours	x	x	<ul style="list-style-type: none"> organic acid blend enhanced by benzyl alcohol enhanced antifungal properties ideal for certified natural formulations: COSMOS & NaTrue compliant 	max. 2.50%	max. 5.64%	max. 2.50%	max. 2.50%	max. 2.50%			36%
euxyl™ eco 910 preservative	Benzyl Alcohol (and) Cymbopogon Flexuosus Leaf Oil (and) Tocopherol	0.5% - 1.0%	+++	+++	++	≤8	40°C	x	x	<ul style="list-style-type: none"> benzyl alcohol boosted by trendsetting lemongrass oil persuades with scenting, anti-inflammatory and anti-oxidant properties ideal for certified natural formulations: COSMOS validated 	max. 1.10%	max. 3.33% (leave-on) max. 11.11% (rinse-off)	max. 1.10%	max. 1.10%	max. 1.10%			10%

+++ highly recommended, ++ recommended, + suitable, - not recommended

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f EU: Not to be used in aerosol dispensers (sprays).

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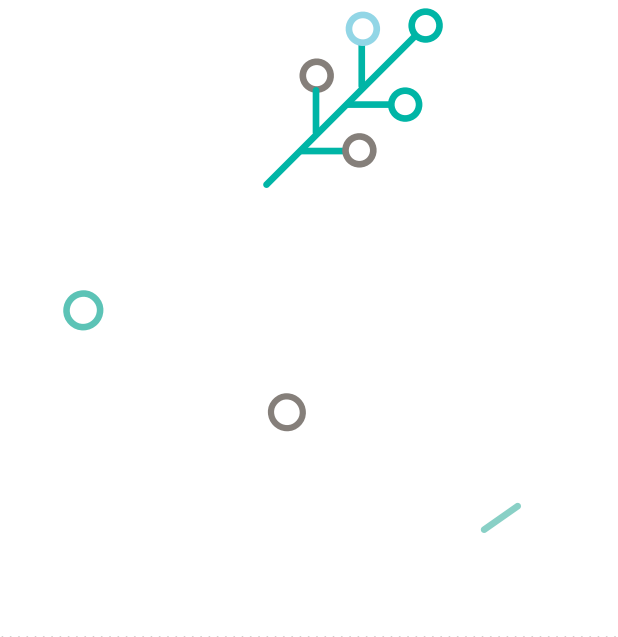
In addition to natural ingredients, we also use synthetic versions of naturally occurring substances with excellent efficacy and worldwide approval for rinse-off and leave-on applications. These powerful antimicrobials are suitable for a variety of natural personal care products and are compliant with a number of certification bodies such as NaTrue; COSMOS; IBD; NPA.





classic preservatives

Tried and true, Ashland's classic preservatives deliver efficient antimicrobial power to a wide variety of personal care products. Balanced, synergistic and with broad spectrum protection, classic preservatives are compatible with many other cosmetic ingredients. These well-known actives are approved in most countries, effective at low doses, and can be used to support other antimicrobial systems.



classic preservatives

trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
germall™ 115 preservative	Imidazolidinyl Urea	0.2% - 0.6%	++	++	+	≤9	60°C	x		<ul style="list-style-type: none"> powerful antibacterial provides head-space protection white, free-flowing hygroscopic powder cost-effective 	max. 0.6%	max. 1.00%	max. 0.6%	max. 0.6%	max. 0.6%	k; l		
germall™ II preservative	Diazolidinyl Urea	0.1% - 0.3%	++	++	+	≤9	60°C	x		<ul style="list-style-type: none"> powerful antibacterial provides head-space protection cost-effective 	max. 0.5%	max. 0.5%	max. 0.5%	max. 0.5%	max. 0.5%	k		
germall™ plus preservative	Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate	0.05% - 0.2%	+++	+++	+++	≤8	50°C	x	x	<ul style="list-style-type: none"> powerful preservative blend with strong fungicidal efficacy provides head-space protection white, free-flowing hygroscopic powder cost-effective 	max. 0.5%	max. 0.5%	max. 0.5%	max. 0.5%	max. 0.5%	i; k; n		
liquid germall™ plus preservative	Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate (and) Propylene Glycol	0.1% - 0.5%	+++	+++	+++	≤8	50°C	x	x	<ul style="list-style-type: none"> preservative blend with strong fungicidal efficacy provides head-space protection cost-effective 	max. 1.26%	max. 1.26%	max. 1.26%	max. 1.26%	max. 1.26%	i; k; n		
germaben™ II preservative	Diazolidinyl Urea (and) Methylparaben (and) Propylparaben (and) Propylene Glycol	0.5% - 1.0%	+++	+++	++	≤8	60°C	x	x	<ul style="list-style-type: none"> preservative blend with strong fungicidal efficacy provides head-space protection 	max. 1.66%	max. 1.66%	max. 1.66%	max. 1.66%	max. 1.66%	h; k		
euxyl™ k 500 preservative	Diazolidinyl Urea (and) Sodium Benzoate (and) Potassium Sorbate (and) Aqua (Water)	0.5% - 1.5%	+++	+++	++	≤6	60°C	x	x	<ul style="list-style-type: none"> preservative blend provides head-space protection cost-effective 	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%	k		
euxyl™ k 510 preservative	DMDM Hydantoin (and) Methylchloroisothiazolinone/ Methylisothiazolinone ⁴	0.1% - 0.4%	-	+++	-	≤8	40°C	x	x	<ul style="list-style-type: none"> preservative blend provides head-space protection cost-effective suitable for neutral rinse-off applications 	max. 0.55% (rinse-off)	max. 0.27% (leave-on) max. 0.55% (rinse-off)	max. 0.55% (rinse-off)	max. 0.55% (rinse-off)	max. 0.55% (rinse-off)	a; j; k		

+++ highly recommended, ++ recommended, + suitable, - not recommended

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

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a Active ingredients without auxiliaries. For full INCI declaration kindly contact us. **h** EU: Not to be used in leave-on products designed for application on the nappy area of children under three years of age. **i** EU: Not to be used in oral and lip products; Not to be used in products for children under 3 years of age, except in bath products/shower gels and shampoo; Not to be used in body lotion and body cream. **j** EU: Approved only for rinse-off products. **k** EU: Finished product must be labelled with the warning 'releases formaldehyde' where the concentration of free formaldehyde in the finished product exceeds 10 ppm. **l** Japan: Not permitted in products that come into contact with mucous membranes. Required warning: Should not be used by infants or by people who are hypersensitive to formaldehyde. **n** U.S. and Japan: Not for use in aerosols.

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classic preservatives

trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
suffocide™ a preservative	Sodium Hydroxymethylglycinate (and) Aqua (Water)	0.5% - 1.0%	++	++	++	≤12	60°C	x	x	<ul style="list-style-type: none"> o broad-spectrum preservative o provides head-space protection o high pH tolerance 	max. 1.00%	no restrictions for the use in cosmetics	max. 1.00%	max. 1.00%	max. 1.00%	k; o		
euxyl™ k 100 preservative	Benzyl Alcohol (and) Methylchloroisothiazolinone/ Methylisothiazolinone ⁴	0.05% - 0.15%	-	+++	-	≤8	40°C	x	x	<ul style="list-style-type: none"> o fast acting preservative blend o cost-effective o suitable for neutral rinse-off applications 	max. 0.21% (rinse-off)	max. 0.10% (leave-on) max. 0.21% (rinse-off)	max. 0.21% (rinse-off)	max. 0.21% (rinse-off)	max. 0.21% (rinse-off)	a; j;		
euxyl™ k 120 preservative	Methylchloroisothiazolinone/ Methylisothiazolinone ⁴	0.05% - 0.10%	-	+++	-	≤8	40°C	x	x	<ul style="list-style-type: none"> o fast acting preservative blend o cost-effective o suitable for neutral rinse-off applications 	max. 0.10% (rinse-off)	max. 0.05% (leave-on) max. 0.10% (rinse-off)	max. 0.10% (rinse-off)	max. 0.10% (rinse-off)	max. 0.10% (rinse-off)	a; j;		
euxyl™ k 145 preservative	2-Bromo-2-Nitropropane-1,3-Diol (and) Methylchloroisothiazolinone/ Methylisothiazolinone ⁴	0.05% - 0.30%	-	+++	-	≤8	40°C	x	x	<ul style="list-style-type: none"> o fast acting preservative blend o cost-effective o suitable for neutral rinse-off applications 	max. 0.30% (rinse-off)	max. 0.15% (leave-on) max. 0.30% (rinse-off)	max. 0.30% (rinse-off)	max. 0.30% (rinse-off)	max. 0.30% (rinse-off)	a; d; j; k		
s&m bronopol rch preservative	2-Bromo-2-Nitropropane-1,3-Diol	max. 0.1%	++	++	++	≤8	40°C	x		<ul style="list-style-type: none"> o crystalline preservative o activity against gram-negative bacteria (<i>Pseudomonas</i> sp.) o fast acting at low use levels 	max. 0.10%	max. 0.10%	max. 0.10%	max. 0.10%	max. 0.10%	d; k		
rokonsal™ se-2 preservative	2-Bromo-2-Nitropropane-1 (and) 3-Diol (and) Ethylparaben (and) Myrtrimonium Bromide (and) PPG-2 Methyl Ether (and) Aqua (Water)	0.1% - 0.3%	+++	+++	++	<7	40°C	x	x	<ul style="list-style-type: none"> o fast acting preservative blend at low use-concentrations o not available in North America 	max. 1.25%	max. 1.25%	max. 1.25%	max. 1.25%	max. 1.25%	d; k		

+++ highly recommended, ++ recommended, + suitable, - not recommended

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

1) Subject to name changes. 2) ASEAN: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. 3) Mercosur: Argentina, Brazil, Paraguay, Uruguay 4) active ingredient without auxiliaries

a Active ingredients without auxiliaries. For full INCI declaration kindly contact us.




d Avoid formulations of nitrosamines.

j EU: Approved only for rinse-off products.

k EU: Finished product must be labelled with the warning 'releases formaldehyde' where the concentration of free formaldehyde in the finished product exceeds 10 ppm.

o Avoid cationics and citrus perfumes. Citrus perfumes may lead to discoloration.

classic preservatives

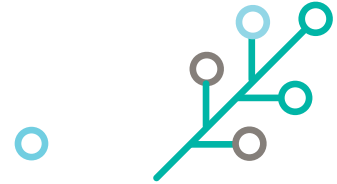
trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
euyl™ k 320 preservative	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylene Glycol	0.5% - 1.4%	+++	++	++	≤8	80°C	x	x	<ul style="list-style-type: none"> o preservative blend based on short-chain parabens o high pH and temperature tolerance o cost-effective 	max. 1.42%	max. 1.42%	max. 1.42%	max. 1.42%	max. 1.42%	e		
euyl™ k 350 preservative	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylene Glycol (and) Ethylhexylglycerin	0.5% - 1.4%	+++	++	++	≤8	80°C	x	x	<ul style="list-style-type: none"> o preservative blend boosted by ethylhexylglycerin o high pH and temperature tolerance 	max. 2.00%	max. 2.00%	max. 2.00%	max. 2.00%	max. 2.00%	e		
s&m methylparaben preservative	Methylparaben	max. 0.40%	++	++	++	≤8	80°C	x	x	<ul style="list-style-type: none"> o crystalline preservative o cost effective 	max. 0.44%	max. 0.40%	max. 0.44%	max. 0.44%	max. 0.44%			

+++ highly recommended, ++ recommended, + suitable, - not recommended

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e The efficacy will be reduced with ethoxylated surfactants.





progressive preservatives

As personal care product manufacturers sell to an increasingly global client base, reliable and effective antimicrobials are needed to protect under various conditions. Ashland's progressive preservatives are based on aromatic alcohols and organic acids, approved for use in all major markets and compatible with a variety of formulations. Effective against gram-positive and gram-negative bacteria, yeast and mold, they offer excellent heat stability, work across a wide pH window and are easily solubilized in water.



progressive preservatives

trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
optiphen™ gp preservative	Phenoxyethanol (and) o-Cymen-5-ol (and) Caprylhydroxamic Acid (and) Propanediol (and) Propylene Carbonate	0.4% - 1.5%	+++	+++	+++	≤8	80 °C	X	X	<ul style="list-style-type: none"> blend with unique delivery system for optimized efficacy designed for challenging leave-on formulations, e.g. sun care contains natural ingredients designed for demanding skin ideal for facial care formulations incl. masks not available in the US 	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%			37%
euxyl™ k 700 preservative	Phenoxyethanol (and) Benzyl Alcohol (and) Potassium Sorbate (and) Aqua (Water) (and) Tocopherol	0.5% - 1.5%	+++	+++	++	≤5.5	80°C (max. 4 hours)	X	X	<ul style="list-style-type: none"> optimized blend with improved color stability cost efficient allrounder designed for demanding skin 	max. 3.20%	max. 3.20%	max. 3.20%	max. 3.20%	max. 3.20%			
euxyl™ k 701 preservative	Phenoxyethanol (and) Benzoic Acid (and) Dehydroacetic Acid (and) Ethylhexylglycerin	0.4% - 1.2%	+++	+++	+++	≤6	80°C (max. 4 hours)	X	X	<ul style="list-style-type: none"> optimized blend boosted by ethylhexylglycerin ideal mild solution for wet wipes 	max. 1.26%	max. 1.26%	max. 1.26%	max. 1.26%	max. 1.26%	f		
euxyl™ k 702 preservative	Phenoxyethanol (and) Benzoic Acid (and) Dehydroacetic Acid (and) Polyaminopropyl Biguanide (and) Ethylhexylglycerin (and) Aqua (Water)	0.4% - 1.0%	+++	++	+++	≤6	80°C (max. 4 hours)	X	X	<ul style="list-style-type: none"> highly effective blend boosted by ethylhexylglycerin and biguanide contains ethylhexylglycerin for performance boosting designed for challenging formulations 	max. 1.35%	max. 1.35%	max. 1.35%	max. 1.35%	max. 1.35%	f; g		
euxyl™ k 703 preservative	Phenoxyethanol (and) Benzoic Acid (and) Dehydroacetic Acid	0.4% - 1.2%	+++	+++	+++	≤6	80°C (max. 4 hours)	X	X	<ul style="list-style-type: none"> market-leading blend of organic acids and aromatic alcohol highly cost effective ideal for all wet wipe formulations 	max. 1.23%	max. 1.23%	max. 1.23%	max. 1.23%	max. 1.23%	f		
optiphen™ bsp preservative (North America) rokonsal™ bsp preservative (Rest of World)	Phenoxyethanol (and) Benzoic Acid (and) Sorbic Acid (and) Propylene Glycol	0.3% - 1.0%	+++	+++	++	≤5.5	80 °C (max. 4 hours)	X	X	<ul style="list-style-type: none"> blend of organic acids and phenoxyethanol cost effective ideal for all wet wipe formulations 	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%			

+++ highly recommended, ++ recommended, + suitable, - not recommended

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

[continued on next page >](#)

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f EU: Not to be used in aerosol dispensers (sprays). g EU: Not to be used in applications that may lead to exposure of the end-user's lungs by inhalation.

progressive preservatives

trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
euxyl™ k 720 preservative	Propylene Glycol (and) Benzoic Acid (and) Caprylyl Glycol	1.0% - 2.0%	+++	+++	+++	≤5.5	80°C (max. 4 hours)	X	X	<ul style="list-style-type: none"> aromatic alcohol-free blend with caprylyl glycol provides skin moisturization no discoloration risk ideal for face and sun care formulations 	max. 2.50% (leave-on) max. 12.50% (rinse-off)	max. 25.00%	max. 2.50% (leave-on) max. 12.50% (rinse-off)	max. 2.50%	max. 2.50% (leave-on) max. 12.50% (rinse-off)			
euxyl™ k 830 preservative	Phenoxyethanol (and) Ethylhexylglycerin (and) Octenidine HCl	0.5% - 1.0%	+++	+	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> optimized blend with strong fungicidal effect contains ethylhexylglycerin as performance booster contributes to in-process production hygiene designed for challenging formulations 	max. 1.11%	max. 1.11%	max. 1.11%	-	max. 1.11%			
euxyl™ k 900 preservative	Benzyl Alcohol (and) Ethylhexylglycerin (and) Tocopherol	0.5% - 1.0%	+++	+	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> counterpart to market-leading euxyl™ pe 9010 preservative contains ethylhexylglycerin as performance booster ideal for emulsions, transparent gels and wet wipe formulations 	max. 1.11%	safe as used	max. 1.11%	max. 1.11%	max. 1.11%	e		
euxyl™ k 940 preservative	Phenoxyethanol (and) Benzyl Alcohol (and) Ethylhexylglycerin (and) Tocopherol	0.5% - 1.5%	+++	+	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> blend with optimized alcohol content for increased usability contains ethylhexylglycerin as performance booster powerful at low use-concentrations 	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%	max. 2.50%			
euxyl™ pe 9010 preservative	Phenoxyethanol (and) Ethylhexylglycerin	0.5% - 1.0%	+++	+	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> market-leading preservative blend contains ethylhexylglycerin as performance booster proven to being microbiome gentle designed for all leave-on formulations 	max. 1.11%	max. 1.11%	max. 1.11%	max. 1.11%	max. 1.11%	e		
optiphen™ preservative	Phenoxyethanol (and) Caprylyl Glycol	0.5% - 1.5%	+++	++	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> blend with reduced aromatic alcohol content contains caprylyl glycol provides skin moisturization compatible with ethoxylated surfactants ideal for leave-on formulations 	max. 1.79%	max. 1.79%	max. 1.79%	max. 1.79%	max. 1.79%			

+++ highly recommended, ++ recommended, + suitable, - not recommended

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e The efficacy will be reduced with ethoxylated surfactants.

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progressive preservatives

trade name ¹	INCI name	recommended use-concentration	leave-on	rinse-off	wet wipes	pH	max. temperature during production	activity against		features and benefits	acc. EU Cosmetics Regulation	acc. CIR (USA)	acc. ASEAN Cosmetic Directive ²⁾	Technical Safety Standards for Cosmetics (TSSC 2015) (China)	acc. Mercosur ³⁾	notes	biodegradable	ISO 16128 % natural origin
								gram+/gram-bacteria	yeast/mold									
optiphen™ 200 preservative	Phenoxyethanol (and) Caprylyl Glycol	0.5% - 1.3%	+++	++	+++	≤12	120°C	x	x	<ul style="list-style-type: none"> well-balanced blend contains caprylyl glycol provides skin moisturization compatible with ethoxylated surfactants ideal for leave-on formulations 	max. 1.35%	max. 1.35%	max. 1.35%	max. 1.35%	max. 1.35%			
optiphen™ plus preservative	Phenoxyethanol (and) Caprylyl Glycol (and) Sorbic Acid	0.5% - 1.5%	+++	+++	+++	≤6	80°C	x	x	<ul style="list-style-type: none"> blend with strong antifungal properties contains caprylyl glycol provides skin moisturization compatible with ethoxylated surfactants ideal for leave-on formulations 	max. 1.91%	max. 1.91%	max. 1.91%	max. 1.91%	max. 1.91%			
s&m phenoxyethanol rch preservative	Phenoxyethanol	max. 1%	++	++	++	≤12	120°C	x	x	<ul style="list-style-type: none"> market-leading preservative vapor phase activity ideal for all formulations 	max. 1.00%	max. 1.00%	max. 1.00%	max. 1.00%	max. 1.00%			
effisin™ pe 5 preservative	Phenoxyethanol	max. 1%	++	++	++	≤12	120°C	x	x	<ul style="list-style-type: none"> market-leading preservative vapor phase activity ideal for all formulations contains 5 ppm phenol 	max. 1.00%	max. 1.00%	max. 1.00%	max. 1.00%	max. 1.00%			

+++ highly recommended, ++ recommended, + suitable, - not recommended

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