

who protects the
high quality of
cosmetic products?

—
we do.



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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 to develop practical, innovative, and elegant solutions that provide, all the help needed to select the right antimicrobial.

Ashland's family of antimicrobials offers a variety of solutions. 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/antimicrobialselector to learn more.

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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?

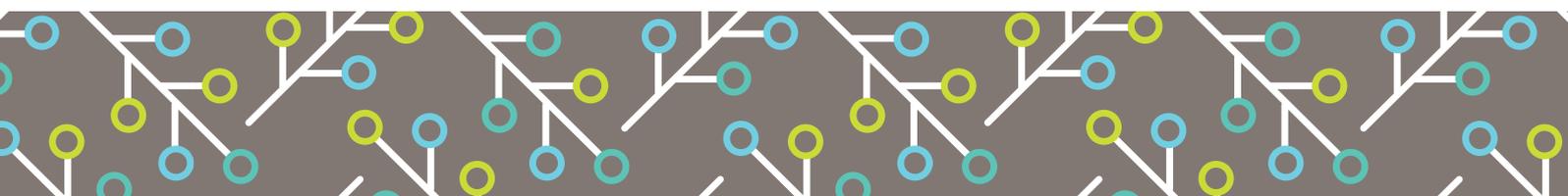
—
we are.



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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 the use in all major markets and suitable for 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.

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progressive preservatives

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
euxyl™ k 700 preservative	Phenoxyethanol (and) Benzyl Alcohol (and) Potassium Sorbate (and) Aqua (Water) (and) Tocopherol			<ul style="list-style-type: none"> optimized blend with improved color stability enhanced fungicidal properties 	x	x	≤5.5	80°C (max. 4 hours)	0.5% - 1.5%	+++	+++	++
euxyl™ k 701 preservative note: a	Phenoxyethanol (and) Benzoic Acid (and) Dehydroacetic Acid (and) Ethylhexylglycerin			<ul style="list-style-type: none"> performs well in challenging formulations excellent cost-performance ratio ideal mild solutions for wet wipes suitable for sensitive applications incl. baby care 	x	x	≤6	80°C (max. 4 hours)	0.4% - 1.2%	+++	+++	+++
euxyl™ k 703 preservative note: a	Phenoxyethanol (and) Benzoic Acid (and) Dehydroacetic Acid			<ul style="list-style-type: none"> market-leading blend of organic acids and aromatic alcohol performs well in challenging formulations excellent cost-performance ratio ideal mild solution for wet wipes suitable for sensitive applications incl. baby care 	x	x	≤6	80°C (max. 4 hours)	0.4% - 1.2%	+++	+++	+++
euxyl™ k 712 preservative	Sodium Benzoate (and) Potassium Sorbate (and) Aqua (Water)		 55%	<ul style="list-style-type: none"> market-leading organic acid blend ready-to-process liquid cost-effective allrounder suitable for oral care and sensitive applications ideal for certified natural formulations: COSMOS & NaTrue compliant 	x	x	≤5.5	80°C (max. 4 hours)	0.5% - 1.5%	+++	+++	++
euxyl™ k 720 preservative	Propylene Glycol (and) Benzoic Acid (and) Caprylyl Glycol			<ul style="list-style-type: none"> aromatic alcohol-free blend provides skin moisturization no discoloration risk ideal for face, wet wipes and baby care formulations 	x	x	≤5.5	80°C (max. 4 hours)	1.0% - 2.0%	+++	+++	+++
euxyl™ k 830 preservative note: b	Phenoxyethanol (and) Ethylhexylglycerin (and) Octenidine HCl			<ul style="list-style-type: none"> contributes to in-process production hygiene optimized blend with strong fungicidal effect vapor phase activity suitable for clear, anhydrous or sensitive applications incl. baby care 	x	x	≤12	120°C	0.5% - 1.0%	+++	+	+++
euxyl™ k 900 preservative note: b	Benzyl Alcohol (and) Ethylhexylglycerin (and) Tocopherol			<ul style="list-style-type: none"> counterpart to market-leading euxyl™ pe 9010 preservative cost-effective blend with short INCI vapor phase activity suitable for clear or anhydrous formulation 	x	x	≤12	120°C	0.5% - 1.0%	+++	+	+++

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

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

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

b The efficacy will be reduced with ethoxylated surfactants.

For global approvals please check product literature or contact your local sales representative.

progressive preservatives

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
euxyl™ k 903 preservative note: a	Benzyl Alcohol (and) Benzoic Acid (and) Dehydroacetic Acid (and) Tocopherol			<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 	x	x	≤6	80°C (max. 4 hours)	0.4% - 1.2%	+++	+++	+++
euxyl™ k 940 preservative note: b	Phenoxyethanol (and) Benzyl Alcohol (and) Ethylhexylglycerin (and) Tocopherol			<ul style="list-style-type: none"> blend with optimized alcohol content for increased usability vapor phase activity 	x	x	≤12	120°C	0.5% - 1.5%	+++	+	+++
euxyl™ pe 9010 preservative note: b	Phenoxyethanol (and) Ethylhexylglycerin			<ul style="list-style-type: none"> market-leading preservative blend cost-effective blend with short INCI vapor phase activity proven to be microbiome gentle designed for all leave-on formulations suitable for clear, anhydrous or sensitive applications incl. baby care 	x	x	≤12	120°C	0.5% - 1.0%	+++	+	+++
optiphen™ preservative	Phenoxyethanol (and) Caprylyl Glycol			<ul style="list-style-type: none"> blend with reduced aromatic alcohol content provides head space activity provides skin moisturization suitable for pH-independent rinse-off formulations suitable for anhydrous and sensitive applications incl. baby care 	x	x	≤12	120°C	0.5% - 1.5%	+++	++	+++
optiphen™ 200 preservative	Phenoxyethanol (and) Caprylyl Glycol			<ul style="list-style-type: none"> well-balanced blend cost-effective blend with short INCI provides skin moisturization suitable for pH-independent rinse-off formulations suitable for anhydrous and sensitive applications incl. baby care 	x	x	≤12	120°C	0.5% - 1.3%	+++	++	+++
optiphen™ bsb-n preservative (North America) rokonsal™ bsb-n preservative (Rest of World)	Benzyl Alcohol (and) Benzoic Acid (and) Sorbic Acid (and) Glycerin		40%	<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 	x	x	≤5.5	80°C max. 4 hours	0.3% - 1.0%	+++	+++	++

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

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progressive preservatives

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
optiphen™ gp preservative <i>not available in the US</i>	Phenoxyethanol (and) o-Cymen-5-ol (and) Caprylhydroxamic Acid (and) Propanediol (and) Propylene Carbonate		37%	<ul style="list-style-type: none"> powerful blend designed for challenging formulations, e.g. sun care suitable for pH-independent rinse-off formulations ideal for facial care formulations incl. masks 	x	x	≤8	80 °C	0.4% - 1.5%	+++	+++	+++
optiphen™ plus preservative	Phenoxyethanol (and) Caprylyl Glycol (and) Sorbic Acid			<ul style="list-style-type: none"> blend with strong antifungal properties provides skin moisturization compatible with ethoxylated surfactants ideal for leave-on formulations suitable for slightly acidic leave-on and rinse-off formulations 	x	x	≤6	80°C	0.5% - 1.5%	+++	+++	+++
effisin™ pe 5 preservative	Phenoxyethanol			<ul style="list-style-type: none"> market-leading preservative vapor phase activity suitable for all formulations contains max. 5 ppm phenol 	x	x	≤12	120°C	max. 1%	++	++	++

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

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multifunctionals

Multifunctional ingredients comprise various families that are classed as diols, ethers, or esters and are widely used in skin care, hair care, wet wipes, toiletries and color cosmetics. In addition to their abilities such as solubilizing, moisturizing or well-aging properties multifunctional ingredients also contribute to antimicrobial stabilization. With a wide pH tolerance they are suitable for many personal care applications.

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multifunctionals

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
phyteq™ raspberry i multifunctional	Raspberry Ketone			<ul style="list-style-type: none"> low dosage provides broad antimicrobial boosting effect provides strong antioxidant and free radical scavenger benefits helps to protect elasticity of the skin (enzyme inhibition) provides anti-inflammation properties good formulation compatibility 	x	x	≤8	80°C	0.3% - 1.0%	+++	++	++
phyteq™ raspberry n multifunctional	Raspberry Ketone		 100%	<ul style="list-style-type: none"> low dosage provides broad antimicrobial boosting effect provides strong antioxidant and free radical scavenger benefits helps to protect elasticity of the skin (enzyme inhibition) provides anti-inflammation properties good formulation compatibility ideal for certified natural formulations: COSMOS validated 	x	x	≤8	80°C	0.3% - 1.0%	+++	++	++
sensiva™ go natural multifunctional	Caprylyl Glycol (and) Glyceryl Caprylate (and) Propanediol		 100%	<ul style="list-style-type: none"> natural blend also with superb performance at neutral pH provides moisturizing properties wetting & refatting agent suitable for sensitive skin (HRIPT tested) ideal for certified natural formulations: COSMOS & NaTrue validated 	x	x	≤7	80°C	0.5% - 2.0%	+++	+	+++
sensiva™ pa 20 multifunctional note: b	Phenethyl Alcohol (and) Ethylhexylglycerin (and) Tocopherol			<ul style="list-style-type: none"> multifunctional blend boosted by ethylhexylglycerin multifunctional option to euxyl™ pe 9010 appealing rose-like scent 	x	x	≤12	80°C	0.5% - 1.1%	+++	+	++
sensiva™ pa 30 multifunctional	Propanediol (and) Phenethyl Alcohol (and) Undecyl Alcohol (and) Tocopherol		 50%	<ul style="list-style-type: none"> appealing rose-like scent can be used for neutral rinse-off formulations 	x	x	≤12	80°C	1.0% - 2.0%	+++	++	++
sensiva™ pa 40 multifunctional	Phenylpropanol (and) Propanediol (and) Caprylyl Glycol (and) Tocopherol		30%	<ul style="list-style-type: none"> powerful well-balanced multifunctional blend strong fungicidal efficacy provides moisturizing and emolliency mild floral scent designed for challenging leave-on formulations, e.g. sun care and color cosmetics 	x	x	≤12	120°C	0.5% - 1.5%	+++	++	++

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

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b The efficacy will be reduced with ethoxylated surfactants.

For global approvals please check product literature or contact your local sales representative.

multifunctionals

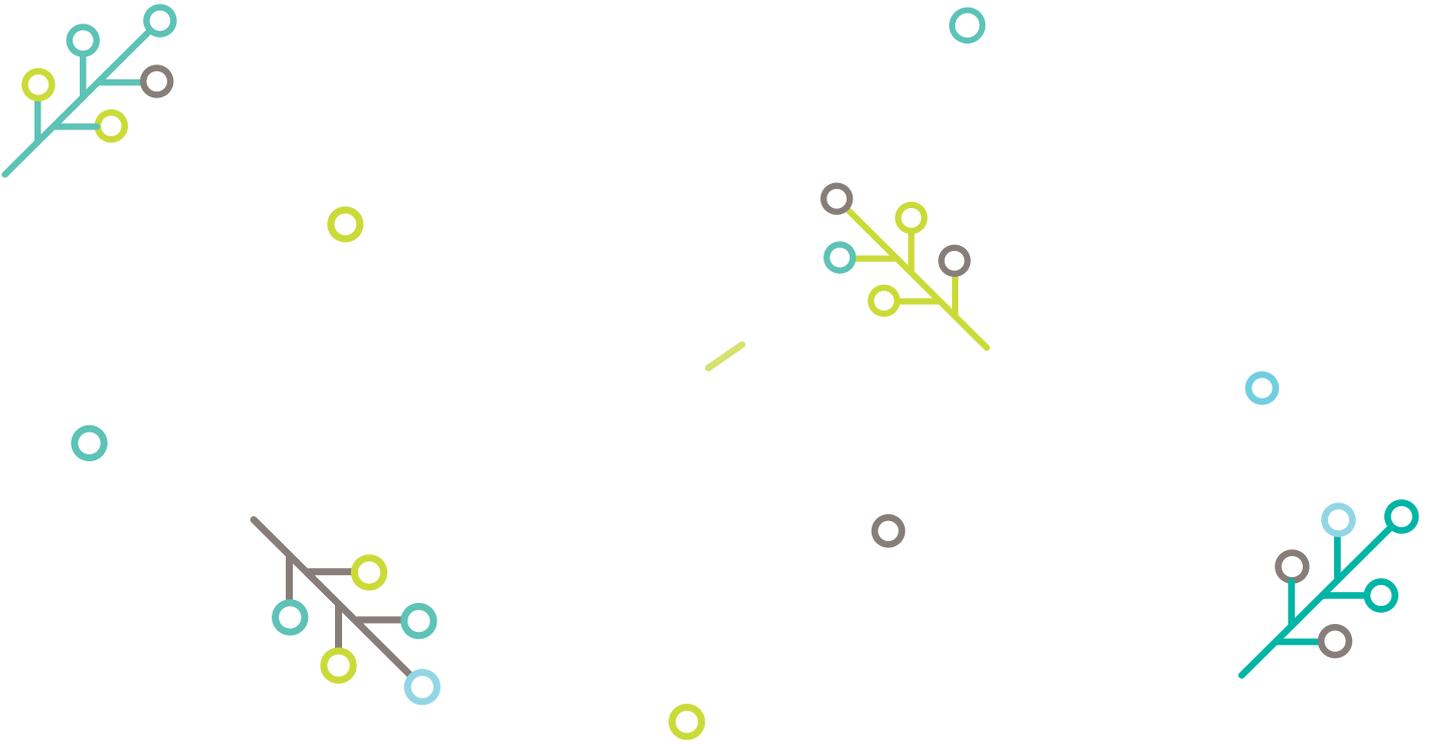
trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
sensiva™ sc 10 multifunctional note: b	Ethylhexylglycerin (and) Caprylyl Glycol			<ul style="list-style-type: none"> booster for antimicrobials provides moisturizing and emolliency suitable for sensitive applications incl. baby care 	x	x	≤12	120°C	0.5% - 2.0%	+++	+	+++
sensiva™ sc 50 multifunctional note: b	Ethylhexylglycerin			<ul style="list-style-type: none"> market-leading multifunctional ingredient booster for antimicrobials skin care emollient provides antioxidative properties boosting and fixating of fragrance ingredients effective against odor-causing bacteria 	x		≤12	120°C	0.3% - 1.0%	+++	+	+++
sensiva™ sc 80 multifunctional not available in the US	Propanediol (and) Caprylyl Glycol (and) Caprylhydroxamic Acid		 64%	<ul style="list-style-type: none"> well-balanced multifunctional blend strong fungicidal efficacy provides antioxidant and well-aging benefits designed for challenging leave-on formulations, e.g. sun care 	x	x	≤8	80°C	0.3% - 1.5%	+++	+++	+++

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

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multifunctionals												
trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
effisin™ hd multifunctional	1,2-Hexanediol			<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency suitable for clear formulations suitable for face care, sensitive applications incl. baby care 	x	x	≤12	120°C	0.5% - 3.0%	+++	++	+++
effisin™ la natural multifunctional	Levulinic Acid (and) Aqua (Water)		 100%	<ul style="list-style-type: none"> good bactericidal efficacy cost-effective ready-to-process liquid ideal for certified natural formulations: COSMOS validated 	x		≤5.5	80°C	max. 1.0%	++	++	++
effisin™ pg multifunctional	Pentylene Glycol			<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency suitable for clear formulations suitable for face care, sensitive applications incl. baby care 	x	x	≤12	120°C	1.0% - 5.0%	++	++	++
effisin™ pg natural multifunctional	Pentylene Glycol		 100%	<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency suitable for clear formulations ideal for face care and sensitive applications incl. baby care ideal for certified natural formulations: COSMOS validated 	x	x	≤12	120°C	1.0% - 5.0%	++	++	++
optiphen™ od multifunctional	Caprylyl Glycol			<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency suitable for clear formulations suitable for sensitive applications incl. baby care 	x	x	≤12	120°C	0.3% - 2.0%	+++	++	+++

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

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naturals

At Ashland, we believe sustainability is vital to the planet and to the health and wellbeing of future generations.

On the way to this noble goal, we support cosmetic manufacturers with biodegradable ingredients of natural origin and synthetic versions of naturally occurring substances that also correspond to the idea of sustainability.

Our 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.

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naturals												
trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
euxyl™ eco 910 preservative	Benzyl Alcohol (and) Cymbopogon Flexuosus Leaf Oil (and) Tocopherol		10%	<ul style="list-style-type: none"> benzyl alcohol boosted by trendsetting lemongrass oil efficient up to neutral pH in both leave-on and rinse-off application provides anti-inflammatory and anti-oxidant properties fresh and invigorating smell ideal for certified natural formulations: COSMOS validated 	x	x	≤8	40°C	0.5% - 1.0%	+++	+++	++
euxyl™ k 712 preservative	Sodium Benzoate (and) Potassium Sorbate (and) Aqua (Water)		 55%	<ul style="list-style-type: none"> market-leading organic acid blend ready-to-process liquid cost-effective allrounder suitable for oral care and sensitive applications ideal for certified natural formulations: COSMOS & NaTrue compliant 	x	x	≤5.5	80°C max. 4 hours	0.5% - 1.5%	+++	+++	++
euxyl™ k 903 preservative note: a	Benzyl Alcohol (and) Benzoic Acid (and) Dehydroacetic Acid (and) Tocopherol			<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 	x	x	≤6	80°C max. 4 hours	0.4% - 1.2%	+++	+++	+++
optiphen™ bsb-n preservative (North America) rokonsal™ bsb-n preservative (Rest of World)	Benzyl Alcohol (and) Benzoic Acid (and) Sorbic Acid (and) Glycerin		40%	<ul style="list-style-type: none"> contains natural glycerin for improved moisturizing enhanced antifungal properties ideal for certified natural formulations: COSMOS & NaTrue validated 	x	x	≤5.5	80°C max. 4 hours	0.3% - 1.0%	+++	+++	++
optiphen™ bsb-w preservative	Benzyl Alcohol (and) Sodium Benzoate (and) Potassium Sorbate (and) Aqua (Water)		36%	<ul style="list-style-type: none"> enhanced antifungal properties excellent cost-performance ratio ideal for certified natural formulations: COSMOS & NaTrue validated 	x	x	≤5.5	80°C max. 4 hours	0.3% - 1.0%	+++	+++	++
phyteq™ raspberry n multifunctional	Raspberry Ketone		 100%	<ul style="list-style-type: none"> low dosage provides broad antimicrobial boosting effect provides strong antioxidant and free radical scavenger benefits helps to protect elasticity of the skin (enzym inhibition) provides anti-inflammation properties good formulation compatibility ideal for certified natural formulations: COSMOS validated 	x	x	≤8	80°C	0.3% - 1.0%	+++	++	++
sensiva™ go natural multifunctional	Caprylyl Glycol (and) Glyceryl Caprylate (and) Propanediol		 100%	<ul style="list-style-type: none"> natural blend also with superb performance at neutral pH provides moisturizing properties wetting & refatting agent suitable for sensitive skin (HRIPT tested) ideal for certified natural formulations: COSMOS & NaTrue validated 	x	x	≤7	80°C	0.5% - 2.0%	+++	+	+++
effisin™ la natural multifunctional	Levulinic Acid (and) Aqua (Water)		 100%	<ul style="list-style-type: none"> good bactericidal efficacy cost-effective ready-to-process liquid ideal for certified natural formulations: COSMOS validated 	x		≤5.5	80°C	max. 1.0%	++	++	++
effisin™ pg natural multifunctional	Pentylene Glycol		 100%	<ul style="list-style-type: none"> well-known multifunctional ingredient adds to microbial stability provides moisturizing and emolliency suitable for clear formulations ideal for face care and sensitive applications incl. baby care ideal for certified natural formulations: COSMOS validated 	x	x	≤12	120°C	1.0% - 5.0%	++	++	++

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

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

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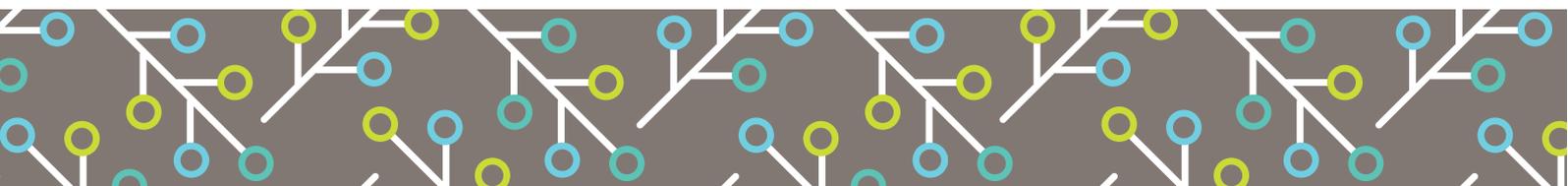
classic preservatives

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.

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classic preservatives

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wetwipes
					bacteria	yeast/mold						
euxyl™ k 100 preservative note: c, d	Benzyl Alcohol (and) Methylchloroisothiazolinone/ Methylisothiazolinone ¹			<ul style="list-style-type: none"> powerful well-balanced and fast acting liquid preservative at very low use levels performs well in challenging formulations excellent cost-performance ratio suitable for neutral pH rinse-off applications 	x	x	≤8	40°C	0.05% - 0.15%	-	+++	-
euxyl™ k 120 preservative note: c,d	Methylchloroisothiazolinone/ Methylisothiazolinone ¹			<ul style="list-style-type: none"> fast acting preservative blend cost-effective suitable for neutral rinse-off applications 	x	x	≤8	40°C	0.05% - 0.10%	-	+++	-
euxyl™ k 145 preservative note: c, d, e, f	2-Bromo-2-Nitropropane-1,3-Diol (and) Methylchloroisothiazolinone/ Methylisothiazolinone ¹			<ul style="list-style-type: none"> fast acting preservative blend cost-effective suitable for neutral rinse-off applications 	x	x	≤8	40°C	0.05% - 0.30%	-	+++	-
euxyl™ k 320 preservative note: b	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylene Glycol			<ul style="list-style-type: none"> preservative blend based on short-chain parabens vapor phase activity cost-effective 	x	x	≤8	80°C	0.5% - 1.4%	+++	++	++
euxyl™ k 350 preservative note: b	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylene Glycol (and) Ethylhexylglycerin			<ul style="list-style-type: none"> preservative blend boosted by ethylhexylglycerin vapor phase activity 	x	x	≤8	80°C	0.5% - 1.4%	+++	++	++
euxyl™ k 500 preservative note: f	Diazolidinyl Urea (and) Sodium Benzoate (and) Potassium Sorbate (and) Aqua (Water)			<ul style="list-style-type: none"> provides head-space protection enhanced antifungal properties 	x	x	≤6	60°C	0.5% - 1.5%	+++	+++	++
euxyl™ k 510 preservative note: c, d, f	DMDM Hydantoin (and) Methylchloroisothiazolinone/ Methylisothiazolinone ¹			<ul style="list-style-type: none"> provides head-space protection cost-effective suitable for neutral rinse-off applications 	x	x	≤8	40°C	0.1% - 0.4%	-	+++	-
germaben™ II preservative note: f, g	Diazolidinyl Urea (and) Methylparaben (and) Propylparaben (and) Propylene Glycol			<ul style="list-style-type: none"> enhanced fungicidal properties provides head-space protection 	x	x	≤8	60°C	0.5% - 1.0%	+++	+++	++

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

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

¹ active ingredient without auxiliaries

b The efficacy will be reduced with ethoxylated surfactants.

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

d EU: Approved only for rinse-off products.

e Avoid formulations of nitrosamines.

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

g EU: Not to be used in leave-on products designed for application on the nappy area of children under three years of age.

For global approvals please check product literature or contact your local sales representative.

classic preservatives

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
germall™ 115 preservative note: f, h	Imidazolidinyl Urea			<ul style="list-style-type: none"> powerful antibacterial provides head-space protection white, free-flowing hygroscopic powder 	x		≤9	60°C	0.2% - 0.6%	++	++	+
germall™ II preservative note: f	Diazolidinyl Urea			<ul style="list-style-type: none"> powerful antibacterial provides head-space protection 	x		≤9	60°C	0.1% - 0.3%	++	++	+
germall™ plus preservative note: f, i, j	Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate			<ul style="list-style-type: none"> enhanced antifungal properties provides head-space protection white, free-flowing hygroscopic powder 	x	x	≤8	50°C	0.05% - 0.2%	+++	+++	+++
liquid germall™ plus preservative note: f, i, j	Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate (and) Propylene Glycol			<ul style="list-style-type: none"> enhanced antifungal properties provides head-space protection white, free-flowing hygroscopic powder 	x	x	≤8	50°C	0.1% - 0.5%	+++	+++	+++
rokonsal™ se-2 preservative note: e, f <i>not available in US</i>	2-Bromo-2-Nitropropane-1 (and) 3-Diol (and) Ethylparaben (and) Myrtrimonium Bromide (and) PPG-2 Methyl Ether (and) Aqua (Water)			<ul style="list-style-type: none"> fast acting preservative blend at low use-concentrations good cost-performance ratio 	x	x	<7	40°C	0.1% - 0.3%	+++	+++	++
sutfocide™ a preservative note: f, k	Sodium Hydroxymethylglycinate (and) Aqua (Water)			<ul style="list-style-type: none"> broad-spectrum preservative provides head-space protection high pH tolerance 	x	x	≤12	60°C	0.5% - 1.0%	++	++	++

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

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

d EU: Approved only for rinse-off products.

e Avoid formulations of nitrosamines.

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

h 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.

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 U.S.: Not for use in aerosols.

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

For global approvals please check product literature or contact your local sales representative.

classic preservatives

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
s&m bronopol rch preservative note: e, f	2-Bromo-2-Nitropropane-1,3-Diol			<ul style="list-style-type: none"> o crystalline preservative o activity against gram-negative bacteria (<i>Pseudomonas sp.</i>) o fast acting at low use levels 	x		≤8	40°C	max. 0.1%	++	++	++
s&m methylparaben preservative	Methylparaben			<ul style="list-style-type: none"> o crystalline preservative o cost effective 	x	x	≤8	80°C	max. 0.40%	++	++	++

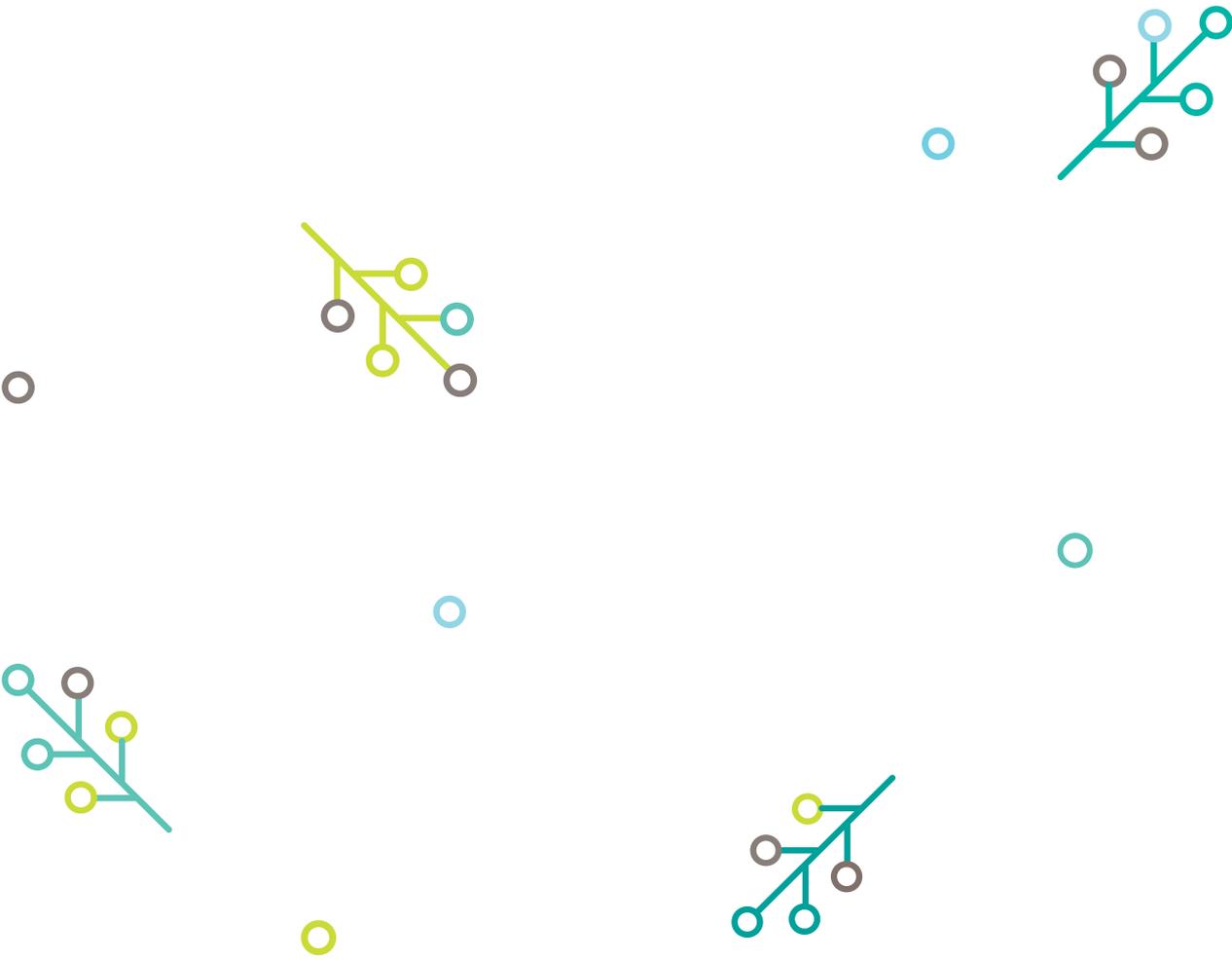
+++ highly recommended, ++ recommended, + suitable, - not recommended

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

e Avoid formulations of nitrosamines.

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

For global approvals please check product literature or contact your local sales representative.





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.

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deodorant actives

trade name	INCI name	biodegradable	ISO 16128 % natural origin	features and benefits	activity against		pH	max. temperature during production	recommended use-concentration	leave-on	rinse-off	wet wipes
					bacteria	yeast/mold						
sensidin™ do skin multifunctional	Propylene Glycol (and) Ethylhexylglycerin (and) Octenidine HCl			<ul style="list-style-type: none"> well-known blend of deodorant ingredients contains powerful octenidine hcl deodorant protection for 24 hours gentle to the skin ideal for roll-on, spray, and areosol deodorants 	x	x	≤12	120°C	0.5% - 1.0%	+++	+	+++
sensidin™ pure skin multifunctional	Propanediol (and) Octenidine HCl		 70%	<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 hcl 	x	x	≤12	120°C	0.03 - 0.3%	+++	+	+++
sensiva™ sc 50 multifunctional note: b	Ethylhexylglycerin			<ul style="list-style-type: none"> market-leading deodorant ingredient booster for antimicrobials boosting and fixating of fragrance ingredients ideal for all deodorant formulations 	x		≤12	120°C	0.3% - 1.0%	+++	+	+++

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

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

b The efficacy will be reduced with ethoxylated surfactants.

For global approvals please check product literature or contact your local sales representative.



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