

Akema Fine Chemicals overview

Since 1973 Akema Fine Chemicals has been manufacturing raw materials for the cosmetic and pharmaceutical industry, specializing in the production of *Allantoin*, *Allantoin derivatives* and *preservatives*.

Akema is an independent family-owned company located in Northern Italy with a well established distribution network over the five continents.

Over its 30 years of activity Akema has successfully supplied the leading cosmetic and pharmaceutical companies and has built up an enviable reputation throughout the world as a reliable manufacturer of top-quality *Allantoin*.

An exclusive range of *Allantoin derivatives* is also produced, which offers to formulators a valuable group of functional compounds for many specific applications.

Akema is one of the leading manufacturers of Imidazolidinyl Urea and Diazolidinyl Urea and has developed over the years a complete range of *preservative systems*, able to meet the challenging needs of the modern cosmetic market.

The company offers a variety of service to its customers including:

- Technical assistance with formulating issues;
- Free samples for R&D works;
- Preservative efficacy testing for the selection of preservatives and the determination of optimal use levels, on product development stage or to improve already existing cosmetics.

The following tables list our range of cosmetic ingredients with their INCI composition, main properties, use levels and applications.

Based on specific needs further preservative systems may be developed and supplied.

The complete product documentation and samples are available upon request.



Allantoin and Allantoin derivatives

Trade name	INCI name CAS number	Description	Use levels %	Applications	General properties
ALLANTOIN	<i>Allantoin</i> 97-59-6	Well recognized skin protectant agent with keratolytic, soothing moisturizing and healing properties. FDA classified as safe and effective active ingredient for Over-the-Counter drug products for adults, children and infants.	0.1-2%	Skin and hair products Shave products Baby products Sun products Bath products Oral products	<ul style="list-style-type: none"> - Fine white powder - Slightly water soluble - Fully compatible with cosmetic ingredients - Stable in pH range 3-8 - Meets CTFA/JSCI requirements
ALLANTOIN USP/EP	<i>Allantoin</i> 97-59-6	Active ingredient for topical drug products, listed in USP, EP and JPC. Keratolytic agent that promotes removal of damaged tissue and dead cells, enhances cell-proliferation and accelerate wounds healing.	1-2%	Cut, abrasions, ulcers Difficult to healing wounds Burns and sun-burns Acne and skin eruptions Dermatitis, Xerosis, Psoriasis	<ul style="list-style-type: none"> - Meets USP, EP and JPC requirements
ALCLOXA	<i>Alcloxa</i> 1317-25-5	Aluminium salt of Allantoin. Combines the astringent and mild antimicrobial properties of aluminium with the skin protectant and healing properties of Allantoin, minimizing irritation due to aluminium salts.	0.1-2%	Antiperspirants, deodorants Oral products Acne and skin eruptions products Shave products Baby products Anorectal drug products	<ul style="list-style-type: none"> - Fine white powder - Water soluble, not alcohol soluble - Stable in pH range 3-8 - Alcohol soluble form available - Allowed for OTC drug products
ALDIOXA	<i>Aldioxa</i> 5579-81-7	Aluminium salt of Allantoin that combines the astringency with the skin protectant and healing effects of Allantoin. Listed in JP for topical drug products.	0.2-2%	Antiperspirants, deodorants Oral products Acne and skin eruptions Baby care Foot products	<ul style="list-style-type: none"> - Fine white powder - Unsoluble in water and alcohol - Meet JP requirements
ALGLYCERA	<i>Allantoin Glycyrrhetic Acid</i> 4572-09-2	Functional compound that combines the anti-inflammatory, antiallergic and skin whitening properties of Glycyrrhetic acid with the keratolytic, healing properties of Allantoin	0.05-0.3%	Dry and sensitive skin products Aftershave products Sunscreen and aftersun products Toothpastes	<ul style="list-style-type: none"> - White-yellowish powder - Alcohol soluble, not water soluble - Working temperature upto 80°C
ALPANTHA	<i>Allantoin Panthenol</i> 71673-21-7	Functional compound with the anti-inflammatory, soothing and moisturizing properties of Panthenol and keratolytic, healing properties of Allantoin	1-5%	Dry and sensitive skin products Hair products Aftershave products Sunscreen and aftersun products Oral and lips products	<ul style="list-style-type: none"> - White powder - Water soluble
ALLANTOIN VC	<i>Allantoin Ascorbate</i> 57448-83-6	Functional compound with the antiaging, antioxidant, bleaching properties of Ascorbic acid and skin protectant properties of Allantoin	0.6-1.2	Face and body products Antiaging products Sun products Hair products	<ul style="list-style-type: none"> - White-yellowish powder - Water soluble
ALMETH	<i>Allantoin Acetyl Methionine</i> 4207-40-3	Functional compound with antiseborrhoeic, antidandruff, antiacne and healing properties.	0.2-1.0	Hair and scalp products Acne and skin eruptions products	<ul style="list-style-type: none"> - Fine white powder - Water soluble
ALPOLYGAL	<i>Allantoin Polygalacturonic Acid</i> 29659-38-9	Functional compound with skin smoothening, softening, moisturizing and anti-irritant properties. Improves formulation skin feel	0.5-1.0	Face and body products Dry and sensitive skin products Mature skin products	<ul style="list-style-type: none"> - White-yellowish powder - Forms clear thin gel in sodium citrate solution

Origin information: allantoin and allantoin derivatives listed are manufactured exclusively from synthetic and vegetal raw materials; no substances of animal origin are contained.

Preservatives for Personal Care

Trade name	INCI name	Antimicrobial spectrum				Use levels %	Applications	Regulatory status			General properties
		Gram+	Gram-	Yeasts	Molds			EU	USA	Japan	
PRESERVATIVE A15	Imidazolidinyl Urea	◆◆◆	◆◆◆	◆	◆	0.2-0.4	Leave-on Rinse-off Wet wipes Topical drugs	■	■	0.3% ⁽¹⁾	<ul style="list-style-type: none"> - Fine white powder - Very water soluble - Stable and effective at pH 3-9 - Working temperature upto 50°C - Meets USP/NF requirements
PRESERVATIVE A2	Diazolidinyl Urea	◆◆◆	◆◆◆	◆	◆◆◆	0.1-0.3	Leave-on Rinse-off Wet wipes	■	■		<ul style="list-style-type: none"> - Fine white powder - Very water soluble - Stable and effective at pH 2-9 - Working temperature upto 50°C
KEMIDANT L	DMDM Hydantoin Water	◆◆◆	◆◆◆	◆	◆◆	0.2-0.5	Leave-on Rinse-off Wet wipes	■	■	0.5% ⁽¹⁾	<ul style="list-style-type: none"> - Stable clear liquid - Very water soluble - Effective in pH range 3-9 - Working temperature upto 80°C
KEMIDANT L 40	DMDM Hydantoin Water	◆◆◆	◆◆◆	◆	◆◆	0.3-1.0	Leave-on Rinse-off Wet wipes	■	■	0.75% ⁽¹⁾	<ul style="list-style-type: none"> - Stable clear liquid - Very water soluble - Effective in pH range 3-9 - Working temperature upto 80°C
KEM 30	Sodium Hydroxymethylglycinate Water	◆◆◆	◆◆◆	◆◆	◆◆◆	0.2-0.5	Leave-on Rinse-off Wet wipes	■	■		<ul style="list-style-type: none"> - Stable clear liquid - Water soluble - Effective in pH range 3.5-12 - Working temperature upto 50°C

Preservative systems with parabens

Trade name	INCI name	Antimicrobial spectrum				Use levels %	Applications	Regulatory status			General properties
		Gram+	Gram-	Yeasts	Molds			EU	USA	Japan	
KEMABEN	Imidazolidinyl Urea Methylparaben Propylparaben Propylene Glycol	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.6-1.2	Leave-on Rinse-off Wet wipes	■	■	1.0% ⁽¹⁾	<ul style="list-style-type: none"> – Stable clear liquid – Water soluble – effective in pH range 3.5-8 – Working temperature upto 50°C
KEMABEN 2	Diazolidinyl Urea Methylparaben Propylparaben Propylene Glycol	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.5-1.0	Leave-on Rinse-off Wet wipes	■	■		<ul style="list-style-type: none"> – Stable clear liquid – Water soluble – Effective in pH range 3.5-8 – Working temperature upto 50°C
KEMABEN 2E	Diazolidinyl Urea Methylparaben Propylparaben Propylene Glycol	◆◆	◆◆	◆◆◆	◆◆◆	0.3-1.0	Leave-on Rinse-off Wet wipes	■	■		<ul style="list-style-type: none"> – Stable clear liquid – Slightly water soluble – Effective in pH range 3.5-8 – Working temperature upto 50°C
KEMABEN 4	Phenoxyethanol Methylparaben Ethylparaben Propylparaben Butylparaben	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.2-1.0	Leave-on Rinse-off Wet wipes Topical drugs	■	■	■	<ul style="list-style-type: none"> – Stable clear liquid – Slightly water soluble – Effective in pH range 3-8 – Working temperature upto 80°C
KEMABEN 5	Phenoxyethanol Methylparaben Ethylparaben Propylparaben Propylene Glycol	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.5-1.5	Leave-on Rinse-off Wet wipes Topical drugs	■	■	■	<ul style="list-style-type: none"> – Stable clear liquid – Water soluble – Effective in pH range 3-8 – Working temperature upto 80°C
KEMABEN DHA	Phenoxyethanol Methylparaben Dehydroacetic acid	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.4-1.0	Leave-on Rinse-off Wet wipes	■	■	■	<ul style="list-style-type: none"> – Stable clear liquid – Water soluble – Effective in pH range 3.5-6 – Working temperature upto 80°C

Trade name	INCI name	Antimicrobial spectrum				Use levels %	Applications	Regulatory status			General properties
		Gram+	Gram-	Yeasts	Molds			EU	USA	Japan	

Preservative systems with IPBC

KEM PLUS	Phenoxyethanol IPBC	◆	◆	◆◆◆	◆◆◆	0.02-0.4	Leave-on Rinse-off Wet wipes	■ ⁽²⁾	■	■	<ul style="list-style-type: none"> Stable clear liquid Slightly water soluble Effective in pH range 4.5-8.5 Working temperature upto 40°C
KEM PLUS 2	Phenoxyethanol IPBC	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.5-0.9	Leave-on Rinse-off Wet wipes	■ ⁽²⁾		■	<ul style="list-style-type: none"> Stable clear liquid Water soluble Effective in pH range 4.5-8.5 Working temperature upto 40°C

Preservative systems with organic acids

KEMIDANT K	DMDM Hydantoin Potassium Sorbate Water	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.2-0.6	Leave-on Rinse-off Wet wipes	■	■	0.6% ⁽¹⁾	<ul style="list-style-type: none"> Stable clear liquid Highly water soluble Effective in pH range 3.5-6 Highly cost-effective
KEM K	Phenoxyethanol Potassium Sorbate Water	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.5-1.2	Leave-on Rinse-off Wet wipes Topical drugs	■	■	■	<ul style="list-style-type: none"> Stable clear liquid Water soluble Effective in pH range 3.5-6 Mild preserving system
KEM E	Benzyl Alcohol Potassium Sorbate Sodium Benzoate Water	◆◆◆	◆◆◆	◆◆◆	◆◆◆	0.5-1.2	Leave-on Rinse-off Wet wipes	■	■	■	<ul style="list-style-type: none"> Stable clear liquid Water soluble Effective in pH range 3-5.5 Allowed in natural & organic cosmetics by Ecocert, Soil Association, AIAB, BDIH

Multifunctional system with antimicrobial properties

Trade name	INCI name	Antimicrobial spectrum				Use levels %	Applications	Regulatory status			General properties
		Gram+	Gram-	Yeasts	Molds			EU	USA	Japan	
STABIL	<i>Phenethyl Alcohol Caprylyl Glycol</i>	◆◆◆	◆◆◆	◆◆◆	◆◆	0.6-1.2	Leave-on Rinse-off	■	■	■	<ul style="list-style-type: none"> - Stable clear liquid, rose odor - Skin emollient and wetting agent - Slightly water soluble - Effective in pH range 4-8 - Stable upto 80°C

Antimicrobial spectrum rating:

- ◆◆◆ high antimicrobial activity
- ◆◆ good antimicrobial activity
- ◆ low antimicrobial activity

Regulatory status:

- Allowed.
 - (1) Max. allowed concentration in rinse-off products, not to be used on mucous membrane and warning label needed.
 - (2) Allowed in bath products, shower gels and shampoos without restrictions; in other rinse-off products can't be used for children under 3 years (label required). Allowed in leave-on products not for use on large part of body and not for children under 3 years (label required). Not to be used for oral-care and lip-care.

NOTE: the concentration of preservatives required for the protection of cosmetic formulations may be unpredictably affected by several factors (such as pH, formula composition and manufacturing hygiene) and should be individually determined by preservative efficacy test. Our laboratory can give the technical and analytical support to select the adequate preservative system and to determine the optimal concentration of use in any application.