KOSTER KEUNEN

SINCE 1852

PRODUCT BROCHURE

Your premium GMPc certified producer of natural and synthetic waxes since 1852

CONTENT

Koster Keunen

Creator and producer of quality waxes
• since 1852 •

Koster Keunen is one of the world's leading processors, refiners and marketers of natural waxes. Since 1852, Koster Keunen has specialized in processing, formulating and marketing quality waxes to the cosmetic, pharmaceutical, candle and food industry.

From beeswax, the foundation of the business and one of our principal products, Koster Keunen has developed a variety of new products to meet new and constantly evolving client requirements.

Our State-of-the-Art facility in The Netherlands is GMPc (ISO 22716) certified and equipped with the latest technology for refining waxes.

This enables us to supply and serve our customers according to the highest standards in the industry.

Our portfolio consists of a wide range of natural waxes as well as beeswax derivatives and blends, specialties such as Kester Waxes and synthetic waxes.

Additionally, we offer tailor-made production and provide toll manufacturing services.

Besides our own products, we provide custom contracts services. Our capabilities include custom blending, reaction chemistry, flexible packaging and various supply forms.

Koster Keunen's strength is its extensive knowledge of waxes and scientific experience in developing new products. By working closely together with our customers' R&D departments as well as formulators we enable our clients to create unique formulas with strong added value in its end product properties.

KOSTER KEUNEN

ABOUT US

We are experts in processing and refining natural waxes according to the highest standards of GMPc & creating special ingredients that highly perform to help our partners and clients go beyond their possibilities, always with sustainability in mind.

OUR COMMITMENTS

PARTNERSHIP

We are a family-owned company with a friendly, flexible, open and honest culture. We are ambitious and inspired by people and we value their genuine passion.

SUSTAINABILITY

We believe in taking care of bees and beekeepers around the world. This is our long-term commitment to a healthy ecosystem with a fair, safe and open supply chain.

QUALITY EXCELLENCE

Our state-of-the-art quality excellence approach goes beyond GMPc certification. This leads to a continuous production consistency and lead time optimization.

INNOVATION

Inspired by the chemistry of beeswax, we built extensive wax knowledge and scientific experience in creating innovative esters with special benefits and unique performance.

SUSTAINABLE BEESWAX PROGRAM

Our sustainable program in Togo, Africa positively impacts 30.000 of beekeepers families

In 2019, Koster Keunen opened a new West African facility in Lomé, Togo, which is 100% dedicated to our sustainable beeswax program. We are structuring, training and improving the good practices of beekeeping in multiple nations.

The supply chain is fully traceable and transparent from the beekeepers to our customers delivery. The results of this work can be seen in the quality and quantity of wax produced, the recurrent income at the local level and professionalization of the local beekeeping society.

These efforts support economic development and nurtures the foundations of beekeeping itself. Having proper training and equipment makes it easier for communities to pass down the tradition to future generations. Koster Keunen knows how priceless that is.

"From one family business to another, we understand the importance of tradition, and we believe beekeeping is a tradition worth cultivating for everyone."

For more information about this program, do not hesitate to contact us.

WAX COLLECTION

Our portfolio for the cosmetic industry is designed **for all types of products** from anhydrous to emulsion and stick to cream formats.

Our core chemistries revolve around **wax and lipid technologies.** Products include **natural and synthetic** chemistries in the following categories:

1. Beeswax
2. Beeswax alternatives
3. Vegetable waxes
4. Natural derivatives
5. Specialty Kester waxes
6. Mineral waxes

FOR ALL TYPES OF PRODUCTS

PRODUCTS

VEGAN ALTERNATIVES

- Permulgin 3351N
- Permulgin 3671
- Natural vegan blend

BEESWAX

- Beeswax Yellow
- Beeswax Yellow EP
- Beeswax White
- Beeswax white EP
- Sustainable beeswax
- Organic beeswax

VEGETABLE WAXES

- Carnauba wax T1
- Organic carnauba wax
- Candelilla wax
- Orange peel wax
- Sunflower wax
- Rice bran wax

ECONOMICAL ALTERNATIVES

- Permulgin 0160
- Permulgin 1205
- Permulgin 3351

BEESWAX DERIVATIVES

- PEG-8 Beeswax
- Siliconyl beeswax
- Cera Bellina EU
- BWester BW67

VEGETABLE WAX DERIVATIVES

- PEG-12 Carnauba
- Siliconyl Candelilla

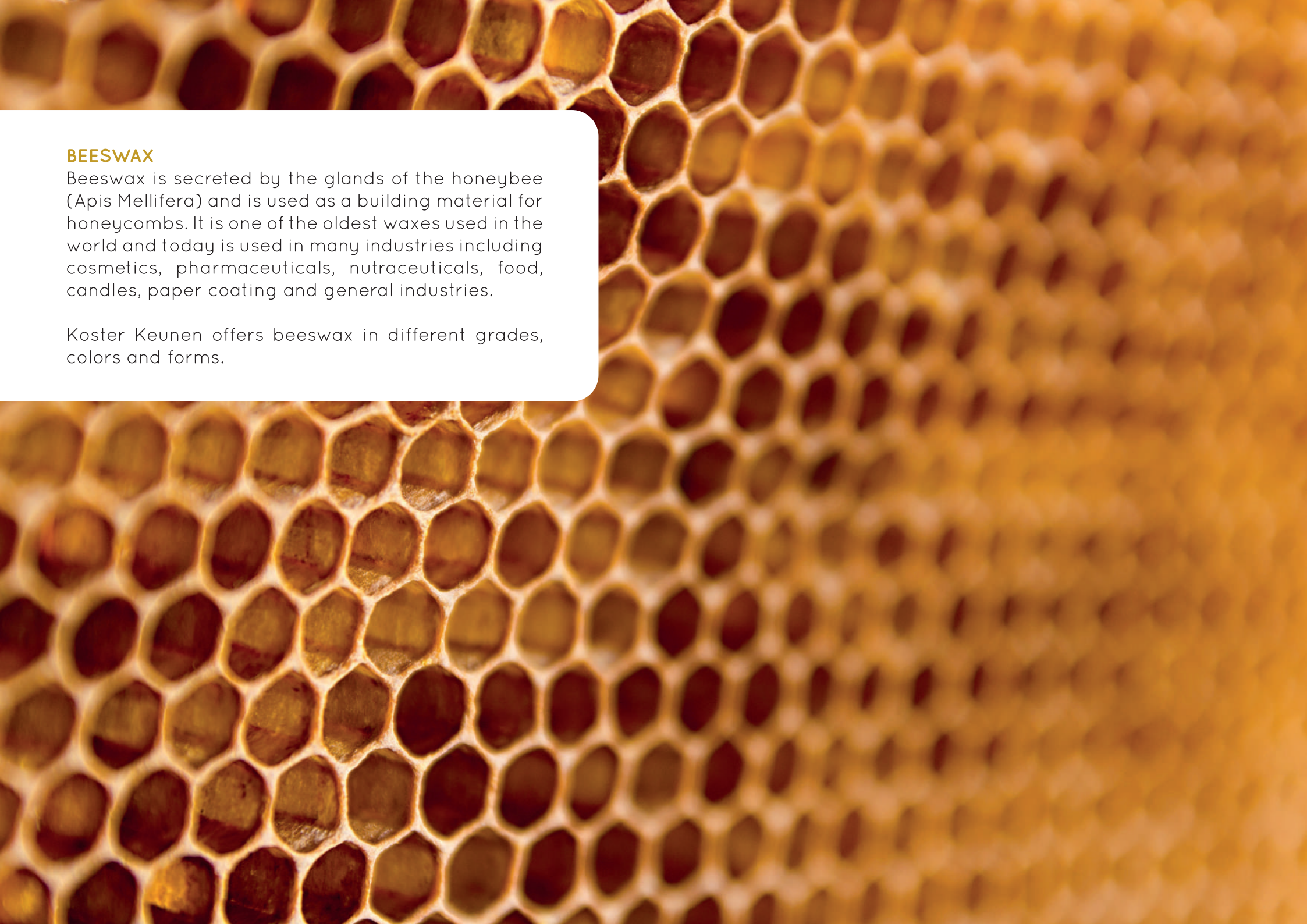
KESTER WAXES

- Kester wax K24
- Kester wax K30G
- Kester wax K62
- Kester wax K72
- Kester wax K82H
- Kester wax K82P
- Kester wax K82P-VS
- Kester wax K82D

MINERAL WAXES

- Permulgin 3280
- Permulgin 3279
- Permulgin 4210
- Permulgin 4212
- Permulgin 4211

KOSTER KEUNEN



BEESWAX

Beeswax is secreted by the glands of the honeybee (Apis Mellifera) and is used as a building material for honeycombs. It is one of the oldest waxes used in the world and today is used in many industries including cosmetics, pharmaceuticals, nutraceuticals, food, candles, paper coating and general industries.

Koster Keunen offers beeswax in different grades, colors and forms.

CODE	E00001	E00003	E00162	E00177	E00185	E00069
NAME	BEESWAX YELLOW	BEESWAX WHITE	BEESWAX WHITE EP	BEESWAX YELLOW EP	SUSTAINABLE BEESWAX	ORGANIC BEESWAX
FORM	Pastilles	Pastilles	Pastilles	Pastilles	Pastilles	Pastilles
DESCRIPTION	Yellowish to brownish-yellow solid, having an agreeable, honey-like odor.	Pure white solid that was carefully bleached in our facilities.	Pharmaceutical-grade pure white solid that was carefully bleached in our facilities.	Pharmaceutical-grade yellowish to brownish-yellow solid.	Beeswax NGO verified by Fair Match Support, sourced from our West African facility in Lomé, Togo (area 100% dedicated to our sustainable beeswax program).	Pure white beeswax organic certified.
INCI-CTFA/EU	Beeswax/Cera Alba					
DROP MELTING POINT (°C)	61 – 66	61 – 66	61 – 66	61 – 66	61 – 66	61 – 66
ACID VALUE (mg KOH/g)	17,0 – 22,0	17,0 – 24,0	17,0 – 22,0	17,0 – 22,0	17,0 – 24,0	17,0 – 22,0
SAPONIFICATION VALUE (mg KOH/g)	87 - 102	87 - 104	89 - 98	89 - 98	87 - 104	87 - 102
HARDNESS	Medium	Medium	Medium	Medium	Medium	Medium
NATURAL INDEX (In / Ino)	1,00 / 1,00	1,00 / 1,00	1,00 / 1,00	1,00 / 1,00	1,00 / 1,00	1,00 / 1,00
CHEMICAL COMPOSITION	It consists of ca. 70 % non-glyceride esters (C38->C62), ca. 12-15 % fatty acids (C16-C36) and ca. 12-16 % paraffinic hydrocarbons (C21-C35)					
PERFORMANCE	**OIL GELLING:** + castor oil / triglycerides **PLASTICITY:** +++ **SKIN FEEL:** Occlusive/Soft, dull residue					
KEY BENEFITS	 **STICK:** Dual functionality as structuring agent and plasticizer enabling the stick to be firm but still flexible, increasing pay-off and decreasing brittleness.			 **EMULSION:** Viscosity building (O/W and W/O) and optional (co-)emulsifier (free fatty acids can be used to make in-situ emulsifiers).		

BEESWAX ALTERNATIVES

Often pure beeswax can be substituted in formulations with Synthetic and Natural Beeswax Alternatives.

These can be a close match to of the physical and chemical properties of natural beeswax by blending a mixture of hydrocarbons, fatty acid esters, fatty acids and alcohols from a non-animal raw material source; or they can mimic the major and minor components of natural beeswax in a cost-effective way giving the structure your system will need.

CODE	E00149	E00142	E00160	E00030	E00140	E00200
NAME	PERMULGIN 3351N	PERMULGIN 3671	PERMULGIN 0160	PERMULGIN 1205	PERMULGIN 3351	NATURAL & VEGAN BLEND
FORM	Pastilles	Pastilles	Pastilles	Pastilles	Pastilles	Pastilles
DESCRIPTION	Vegan synthetic beeswax simulating the properties of natural beeswax.	Vegan synthetic beeswax easily emulsified by saponification.	An economical beeswax blend, maintaining the properties of Beeswax.	An economical beeswax blend with synthetic waxes, simulating the properties of natural beeswax.	An economical beeswax blend, simulating the properties of natural beeswax.	**Vegan natural beeswax alternative** that does not contain any palm- or GMO-derived ingredients.
INCI-CTFA/EU	Synthetic Beeswax	Synthetic Beeswax	Beeswax, Synthetic Beeswax/ Cera alba, Synthetic Beeswax	Synthetic Beeswax, Beeswax/ Synthetic Beeswax, Cera alba	Synthetic Beeswax, Beeswax/ Synthetic Beeswax, Cera alba	Oryza Sativa (Rice) Bran wax, Hydrogented Castor oil, Allanblackia Floribunda/ Oryza Sativa Cera, Hydrogenated Castor Oil, Allanblackia Floribunda
DROP MELTING POINT (ºC)	61 – 66	72 – 77 *Congealing point	61 – 66	60 – 66	61 – 66	75 – 85
ACID VALUE (mg KOH/g)	17,0 – 24,0	20,0 – 25,0	17,0 – 24,0	17,0 – 24,0	17,0 – 24,0	0,0 – 15,0
SAPONIFICATION VALUE (mg KOH/g)	87 - 104	147 - 157	87 - 104	87 - 104	87 - 104	105 - 135
HARDNESS	Hard	Hard	Hard	Hard	Hard	Hard
NATURAL INDEX (In / Ino)	0,37 / 0,48	0,66 / 0,78	0,51 / 0,94	0,50 / 0,59	0,40 / 0,50	1,00 / 1,00
CHEMICAL COMPOSITION	It consists of hydrocarbon waxes, vegetable fatty acid and hydrogenated vegetable oil.	It consists of hydrocarbon waxes, vegetable fatty acid and hydrogenated vegetable oil.	It consists of beeswax, hydrocarbon waxes, vegetable fatty acid and vegetable-based monoester.	It consists of beeswax, hydrocarbon waxes, vegetable fatty acid and hydrogenated vegetable oil.	It consists of beeswax, hydrocarbon waxes, vegetable fatty acid and hydrogenated vegetable oil.	It consists of monoester, vegetable fatty acid and hydrogenated vegetable oil.
PERFORMANCE	**OIL GELLING:** + **PLASTICITY:** + **SKIN FEEL:** Occlusive	**OIL GELLING:** + **PLASTICITY:** + **SKIN FEEL:** Occlusive	**OIL GELLING:** + **PLASTICITY:** ++ **SKIN FEEL:** Occlusive	**OIL GELLING:** + **PLASTICITY:** + **SKIN FEEL:** Occlusive	**OIL GELLING:** + **PLASTICITY:** + **SKIN FEEL:** Occlusive	**OIL GELLING:** + **PLASTICITY:** ++ **SKIN FEEL:** Less occlusive / add slip
KEY BENEFITS	 **STICK:** Dual functionality as structuring agent and plasticizer enabling the stick to be firm but still flexible, increasing pay-off and decreasing brittleness.			 **EMULSION:** Viscosity building (O/W and W/O) and optional (co-)emulsifier (free fatty acids can be used to make in-situ emulsifiers).		

VEGETABLE WAXES

Koster Keunen offers an extensive range of natural plant-based waxes from around the world. The main function of vegetable waxes is to form a barrier that protects the plants against the environment and prevents excessive evaporation.

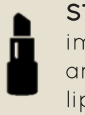
Natural vegetable waxes are extracted from different parts of the plant. Carnauba and Candelilla waxes are respectively extracted from the leaves of palm trees and shrubs. Rice bran, Sunflower and Orange peel waxes are obtained from winterization of the seed or fruit oils.

CODE	E00018	E00070	E00017
NAME	**CARNAUBA WAX T1**	**ORGANIC CARNAUBA WAX**	**CANDELILLA WAX**
FORM	Flakes	Flakes	Pastilles
DESCRIPTION	A very hard wax with high melting point obtained from the leaves of a palm tree named *Copernicia cerifera*, indigenous to northern Brasil. The younger leaves provide the prime T1 yellow color.	Pure carnauba wax organic certified.	A hard wax obtained from a shrub named *Euphorbia cerifera*, indigenous to northern Mexico. Extraordinary oil binding properties, improving the stability and texture of cosmetic products.
INCI-CTFA/EU	Copernicia Cerifera (Carnauba) Wax/ Copernicia Cerifera Cera		Euphorbia Cerifera (Candelilla) Wax/ Candelilla Cera
DROP MELTING POINT (°C)	80 – 86	81 – 86	68 – 73
ACID VALUE (mg KOH/g)	2,0 – 7,0	2,0 – 7,0	12,0 – 22,0
SAPONIFICATION VALUE (mg KOH/g)	78 - 95	78 - 95	43 - 65
HARDNESS	Hard	Hard	Hard
NATURAL INDEX (In / Ino)	1,00 / 1,00	1,00 / 1,00	1,00 / 1,00
CHEMICAL COMPOSITION	It consists mainly of esters (ca. 85 %), free long chain fatty alcohols (ca. 13 %), free fatty acids and resins.		It consists of hydrocarbons (ca. 50 %, C29-C33, mainly C31), esters, phytosterols, free fatty acids, free fatty alcohols and resins.
PERFORMANCE	**OIL GELLING:** + non-polar/unsaturated oils **PLASTICITY:** - **SKIN FEEL:** Add resistance/shine/occlusive/thick residue		**OIL GELLING:** +++ triglycerides **PLASTICITY:** - **SKIN FEEL:** Glossy/shine/add slip/thick residue
KEY BENEFITS	**STICK:** Because carnauba wax has the highest melting point, it is suitable for improving the temperature stability of the stick.		**STICK:** Hardness without increasing melting point, brittle, exceptional oil binding, water repellent of the stick. **EMULSION:** Improves stability and consistency (W/O).

CODE	E00068	E00167	E00130
NAME	**ORANGE PEEL WAX**	**SUNFLOWER WAX**	**RICE BRAN WAX**
FORM	Semi-solid	Pastilles	Pastilles
DESCRIPTION	A soft wax obtained from the rind of the orange fruit after separation from orange essential oils and citrus terpenes. It contains small amounts of flavonoids, carotenoids, glycolipids and phospholipids. **A natural alternative for lanolin.**	A hard, crystalline, high melting vegetable wax obtained from winterization of sunflower oil. **A natural alternative for mineral waxes.**	A hard, crystalline, high melting vegetable wax obtained from rice husks.
INCI-CTFA/EU	Citrus Aurantium Dulcis Peel Wax/ Citrus Aurantium Dulcis Peel Cera	Helianthus Annuus (Sunflower) Seed Wax/ Helianthus Annuus Seed Cera	Oryza Sativa (Rice) Bran Wax/ Oryza Sativa Cera
DROP MELTING POINT (°C)	35 – 60	73 – 78	77 – 83
ACID VALUE (mg KOH/g)	10,0 – 30,0	≤ 5,0	≤ 13,0
SAPONIFICATION VALUE (mg KOH/g)	70 - 110	84 - 98	75 - 120
HARDNESS	Soft	Hard	Hard
NATURAL INDEX (In / Ino)	1,00 / 1,00	1,00 / 1,00	1,00 / 1,00
CHEMICAL COMPOSITION	A complex mixture of special esters (ca. 50-65 %, C44-C58), free fatty acids (6-15 %, C14-C22), hydrocarbons (8-15 %, C21-C33), free phytosterols (ca. 4-8 %) and free alcohols.	It consists of very long chain saturated C42-C60 esters derived from C20-C32 fatty alcohols and C20-C28 fatty acids.	It consists of very long chain saturated C46-C62 esters from C20-C36 fatty alcohols and C20-C26 fatty acids.
PERFORMANCE	**OIL GELLING:** - **PLASTICITY:** - **SKIN FEEL:** Smooth/emollient	**OIL GELLING:** +++++ broad oil range **PLASTICITY:** - **SKIN FEEL:** Soft, transparent melt, silky/thin residue, easy to spread/glide, not sticky	**OIL GELLING:** ++++ broad oil range **PLASTICITY:** - **SKIN FEEL:** not sticky/add slip/thin residue
KEY BENEFITS	 **EMULSION:** co-emulsifiers aiding emulsion stability.	 **STICK:** The most efficient structuring wax with exceptional oil gelling property.  **EMULSION:** Consistency modifier	 **STICK:** Very good oil gelling  **EMULSION:** Consistency modifier

NATURAL DERIVATIVES

By adapting selected fractions of beeswax and vegetable waxes, we have created innovative products to achieve specific goals such as improvement of specific characteristics like plasticity, oil gelling, emulsification, skin feel, stability and compatibility with cosmetic ingredients.

CODE	E00061	E00168	E00065	E00021
NAME	**PEG-8 BEESWAX**	**CERA BELLINA**	**SILICONYL BEESWAX**	**BWESTER BW67**
FORM	Pastilles	Pastilles	Pastilles	Pastilles
DESCRIPTION	A non-ionic beeswax with hydrophilic & self-emulsifying properties, improved stability and oil gelling.	A polar beeswax in which the elimination of free fatty acids leads to increased hydrophilicity, superb stability and improved oil gelling.	Beeswax with silicone benefits in which the elimination of free fatty acids leads to film-forming properties, improved skin feel and texture, improved oil gelling and compatibility with silicone ingredients.	A beeswax derivative blend in which the elimination of free fatty acids leads to improved oil gelling property and improved compatibility with cosmetic ingredients.
INCI-CTFA/EU	PEG-8 Beeswax	Polyglyceryl-3 Beeswax	Bis-PEG-12 Dimethicone Beeswax	Stearyl Beeswax, Behenyl Beeswax
DROP MELTING POINT (ºC)	59 – 70	65 – 72	62 – 72	64,0 – 69,0 *Congealing point
ACID VALUE (mg KOH/g)	≤ 5,0	≤ 2,0	≤ 4,5	≤ 3,0
SAPONIFICATION VALUE (mg KOH/g)	77 - 90	84 - 98	70 - 90	78 - 90
HARDNESS	Medium	Medium	Medium	Medium
NATURAL INDEX (In / Ino)	0,00 / 0,88	0,00 / 0,96	0,00 / 0,80	0,00 / 1,00
CHEMICAL COMPOSITION	The free fatty acids of beeswax have been converted into polyethylene glycol esters.	The free fatty acids of beeswax have been converted to polyglycerol esters.	The free fatty acids of beeswax have been esterified with a high molecular weight silicone alcohol.	The free fatty acids have been converted to esters of similar chain lengths (total ester fraction > 85 %), using natural vegetable fatty alcohols.
PERFORMANCE	**OIL GELLING:** ++ **PLASTICITY:** ++ **SKIN FEEL:** Less tacky/ Less occlusive	**OIL GELLING:** ++ natural, synthetic oils **PLASTICITY:** ++ **SKIN FEEL:** Very pleasant/ Less tacky/Less occlusive	**OIL GELLING:** ++ **PLASTICITY:** ++ **SKIN FEEL:** Non-greasy/ Non-tacky/Not-occlusive	**OIL GELLING:** +++ castor oil, triglycerides, alkanes, volatile silicones **PLASTICITY:** ++ **SKIN FEEL:** Moderate occlusive
KEY BENEFITS	 **STICK:** Reduces crystallization improves pigment dispersion and suppresses migration of lipid and color ingredients.  **EMULSION:** Acts as a co-emulsifier, allowing very high oil contents (O/W).	 **STICK:** Suppresses all syneresis and inhibits crystallization. Improved stability (stable non-granulargels) and dispersion aid for organic and inorganic pigments, mineral and polymer extenders.  **EMULSION:** Consistency modifier.(O/W).	 **STICK:** Film forming, improves skin feel, texture (more pay-off, gloss, lubricity and spreadability) suppresses crystallization and aids in pigment dispersion.  **EMULSION:** Improves stability and contributes to barrier properties.	 **STICK:** Excellent oil-gelling, most cosmetic oils can be gellified, even volatile silicones.  **EMULSION:** Improves stability and consistency modifier.

CODE	E00064	E00066
NAME	**PEG-12 CARNAUBA**	**SILICONYL CANDELILLA**
FORM	Pastilles	Pastilles
DESCRIPTION	A non-ionic carnauba wax created by esterification with polyethylene glycol which imparts strong hydrophilic, self-emulsifying properties, improved stability and oil gelling.	Candelilla wax with silicone benefits in which the addition of silicone improved the skin feel, texture, film forming property and compatibility with silicone ingredients.
INCI-CTFA/EU	PEG-12 Carnauba	Bis-PEG-12 Dimethicone Candelilla
DROP MELTING POINT (ºC)	80 – 85	62 – 75
ACID VALUE (mg KOH/g)	≤ 2,0	≤ 3,5
SAPONIFICATION VALUE (mg KOH/g)	60 - 75	45 - 65
HARDNESS	Hard	Hard
NATURAL INDEX (In / Ino)	0,00 / 0,73	0,00 / 0,85
CHEMICAL COMPOSITION	The free fatty acids of carnauba are converted into polyethylene glycol esters.	The esterification product of candelilla wax with a high molecular weight silicone alcohol.
PERFORMANCE	**OIL GELLING:** ++ **PLASTICITY:** - **SKIN FEEL:** Less occlusive	**OIL GELLING:** +++ **PLASTICITY:** ++ **SKIN FEEL:** Non-tacky/Non-greasy
KEY BENEFITS	**STICK:** Greatly enhanced compatibilities, solubility (allows the incorporation of water and water soluble actives and suppresses migration of lipid and color ingredients), better film forming, texture, gloss and pigment dispersion. **EMULSION:** Acts as a co-emulsifier, improves stability and homogeneity (O/W).	**STICK:** Film forming, improves skin feel, texture (pay-off, gloss, lubricity and spreadability), suppresses crystallization and aids in pigment dispersion. **EMULSION:** Improves stability and contributes to barrier properties.

SPECIALTY KESTER WAXES

Inspired by the different fractions of natural waxes, our R&D department has created the Kester wax collection, a variety of ester molecules with unique chemistry and special properties.

By blowing these fractions out of proportion, these ingredients provide significant benefits to final products.

CODE	E00016	E00125	E00031	E00011
NAME	KESTER WAX K82P	KESTER WAX K82P-VS	KESTER WAX K82D	KESTER WAX K82H
FORM	Slabs	Semi-solid	Pastilles	Pastilles
DESCRIPTION	A high melting point ester that mimics the complex polyester fraction of beeswax responsible for the plastic properties. It has excellent oil biding, film forming and adhesion properties. It can be used as a vegan replacement for beeswax.	A spin-off product of K82P, this ester shows even softer and improved plasticizing property that increase the formulation window for difficult mixtures (hard waxes/crystallization issues).	A high melting point dimer acid ester of very long chain synthetic fatty alcohols with properties in between K-82H-great structuring and K-82P-great plasticizer. It combines a high melting pointwith plasticity above ca. 55 ºC, although relatively hard at room temperature. It can replace mineral waxes in many applications.	This high melting very hard synthetic ester wax is a synthetic version of the monoester fraction of beeswax. Contrary to carnauba, it is odorless and has excellent oil-gelling capacity for a broad oil range. It can replace carnauba wax in many applications.
INCI-CTFA/EU	Synthetic beeswax	Synthetic beeswax	Di-C20-40 Alkyl Dimer Dilinoleate	C20-40 Alkyl Stearate
DROP MELTING POINT (ºC)	78,0 – 86,5 *Congealing point	83 – 95	78,0 – 84,0 *Congealing point	83 - 89
ACID VALUE (mg KOH/g)	≤ 5,0	≤ 10,0	≤ 5,0	≤ 3,0
SAPONIFICATION VALUE (mg KOH/g)	86 - 98	110 - 155	64 - 79	62 - 73
HARDNESS	Medium	Soft	Hard	Hard
NATURAL INDEX (In / Ino)	0,00 / 0,50	0,00 / 0,63	0,00 / 0,00	0,00 / 0,41
CHEMICAL COMPOSITION	A range of hydroxy polyesters with chain lengths between ca. C56 and C76, manufactured from natural fatty acids and synthetic fatty alcohols.	A range of hydroxy polyesters, manufactured from natural fatty acids and synthetic fatty alcohols.	It contains di-esters with carbon chain lengths varying from ca C76 to over C116.	It contains straight chain esters with chain lengths between ca. C38 and C68 and is manufactured from natural fatty acids and synthetic fatty alcohols.
PERFORMANCE	**OIL GELLING:** - **PLASTICITY:** ++++ **SKIN FEEL:** Very soft/tacky	**OIL GELLING:** - **PLASTICITY:** +++++ **SKIN FEEL:** More tacky	**OIL GELLING:** +++ vegetable oils / silicones **PLASTICITY:** + **SKIN FEEL:** No stickiness/ no tackiness	**OIL GELLING:** ++++ broad oil range **PLASTICITY:** - **SKIN FEEL:** No stickiness/ no tackiness
KEY BENEFITS	 **STICK:** Reduces crystallization and improves pigment dispersion. Allows high % of pigments (compatible with inorganic pigments) and hard waxes in a formulation. In combination with high melting waxes, it can be used to increase the softening point of sticks.	 **STICK:** Because of its longer chain lengths and increased polarity it exerts an even more pronounced influence on rheology and texture, binding, adhesion and pigment dispersion. Its excellent pigment compatibility improves its application in pencils and sun care products.	 **STICK:** Very good oil-gelling; it creates glossy, silky, slightly transparent gels; additional viscosity can be achieved without causing brittleness.	 **STICK:** Very good oil-gelling and broad compatibility with lipid ingredients. Most cosmetic oils can be gelled.  **EMULSION:** Improves stability and consistency (W/O & O/W).

CODE	E00090	E00029	E00028	E00178
NAME	KESTER WAX K72	KESTER WAX K62	KESTER WAX K30G	KESTER WAX K24
FORM	Pastilles	Pastilles	Semi-solid	Semi-solid
DESCRIPTION	A naturally derived high purity mono-ester wax with thermal stability, narrow thermal phase change, excellent structuring and gelling capacity. It improves stick strength and break resistance due to its crystalline characteristic.	A naturally derived ester wax created from the esterification of long chain saturated fatty alcohols and acids of vegetable origin providing a rigid structural network, improved oil-binding, emolliency, gloss and lubricity. Similar structure to Jojoba wax and Synthetic Spermaceti (Cetyl esters wax), with a higher melting point. It can replace Hydrogenated Jojoba Oil in many applications.	A very low melting point, hard, brittle and powdery wax that combines hardness and high molecular weight with a melting point just below body temperature, important to improve the sensory properties of a formulation. Its molecules have a remarkable star-like shape consisting of three outward directed alkyl chains of similar length with the ester bond located. Natural replacement for light weight silicones.	A naturally derived low molecular weight high purity monoester of coconut and palm oils (RSPO certified sustainable) with very low melting point that is compatible with most cosmetic ingredients. Alone, it will give a dry and powdery feel on the skin. The initial slip felt on the break is due to its quick phase change and low melt point. When combined with other oils and cosmetic esters it works to "degrease" formulations.
INCI-CTFA/EU	Behenyl Behenate	Cetearyl Behenate	Tetradecyloctadecyl Stearate	Lauryl Laurate
DROP MELTING POINT (ºC)	69 – 75	60 – 66	35 – 45	23 – 30
ACID VALUE (mg KOH/g)	≤ 2,0	≤ 4,0	≤ 3,0	≤ 2,0
SAPONIFICATION VALUE (mg KOH/g)	79 - 89	90 - 99	65 - 80	130 - 150
HARDNESS	Hard	Hard	Hard	Hard
NATURAL INDEX (In / Ino)	0,00 / 1,00	0,00 / 1,00	0,00 / 0,39	0,00 / 1,00
CHEMICAL COMPOSITION	It contains monoesters with carbon chain lengths between ca. C40-C44 and with narrow distribution.	It contains esters with carbon chain lengths between ca. C32-C46, especially C36-C44.	Created by esterification of a special long chain guerbet alcohol with vegetable fatty acids.	It contains esters with carbon chain lengths between ca. C20-C24.
PERFORMANCE	**OIL GELLING:** +++ **PLASTICITY:** - **SKIN FEEL:** No stickiness/ no tackiness	**OIL GELLING:** ++ **PLASTICITY:** - **SKIN FEEL:** No stickiness/ no tackiness	**OIL GELLING:** + **PLASTICITY:** - **SKIN FEEL:** Silicone-like feel	**OIL GELLING:** - **PLASTICITY:** - **SKIN FEEL:** Dry/powdery/ cooling effect

STICK: Natural structuring, good thermal stability, good compatibility with a wide range of solvents. It works to "degrease" formulations.

STICK: Natural structuring, oil biding. Contributes to break resistance, pay-off and mould release. It works to "degrease" formulations.

EMULSION: Consistency modifier (W/O & O/W).

STICK/EMULSON: It contributes to texture, skin feel, lubricity and improves the spread and slip properties of a formulation, while reducing greasiness, stickiness and occlusivity.

STICK/EMULSON: It can replace many ester oils in cosmetic formulation while increasing stability. Because of the low melting point, stability is improved and esthetics regulated, without producing the ossclusive skin feel found using esters and oils alone.

MINERAL WAXES

Mineral waxes are produced during petroleum refinement. They contain long, hydrocarbon chains which correlate to a higher molecular weight.

Microcrystalline Waxes are characterized by their fine crystalline structure in contrast to the larger crystalline structure of paraffin wax. Ozokerite is a blend of microcrystalline and paraffin waxes.

These waxes have excellent gelling and plasticity properties, and Koster Keunen carries an assortment of different melting points and penetrations to best fit formulators' requirements.

CODE	E00126	E00148	E00127	E00137	E00138
NAME	**PERMULGIN 4210**	**PERMULGIN 4212**	**PERMULGIN 4211**	**PERMULGIN 3279**	**PERMULGIN 3280**
FORM	Slabs	Pastilles	Pastilles	Pastilles	Pastilles
DESCRIPTION	A soft flexible mineral wax with excellent oil-binding and oil-gelling properties. It can be used in pharmaceutical products.	A soft mineral wax with excellent oil-binding and oil-gelling properties.	A hard mineral wax with excellent oil-binding and oil-gelling properties.	A mineral wax of the ozokerite type that combines the advantages of paraffin waxes and microcrystalline waxes.	A mineral wax of the ozokerite type with high melting point that combines the advantages of paraffin waxes and microcrystalline waxes.
INCI-CTFA/EU	Hydrogenated Microcrystalline Wax	Hydrogenated Microcrystalline Wax	Hydrogenated Microcrystalline Wax	Ozokerite	Ozokerite
DROP MELTING POINT (ºC)	70 – 78	70,0 - 74,0 *Congealing point	82,0 – 88,0 *Congealing point	63 – 75	70 – 79
ACID VALUE (mg KOH/g)	≤ 0,5	≤ 0,1	≤ 0,1	≤ 0,5	≤ 0,1
SAPONIFICATION VALUE (mg KOH/g)	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4
HARDNESS	Soft	Medium	Hard	Hard	Hard
NATURAL INDEX (In / Ino)	0,00 / 0,00	0,00 / 0,00	0,00 / 0,00	0,00 / 0,00	0,00 / 0,00
CHEMICAL COMPOSITION	It consists of isoparaffinic and naphthenic hydrocarbons with carbon chain lengths of ca. C35-C70.	It consists of isoparaffinic and naphthenic hydrocarbons with carbon chain lengths of ca. C35-C70.	It consists of isoparaffinic and naphthenic hydrocarbons with carbon chain lengths of ca. C35-C70.	It consists of paraffinic, isoparaffinic and naphthenic hydrocarbons with carbon chain lengths between ca. C20 and C70.	It consists of paraffinic, isoparaffinic and naphthenic hydrocarbons with carbon chain lengths between ca. C20 and C70.
PERFORMANCE	**OIL GELLING:** +++ **PLASTICITY:** +++ **SKIN FEEL:** Spread evenly	**OIL GELLING:** +++ **PLASTICITY:** ++ **SKIN FEEL:** Spread evenly	**OIL GELLING:** +++ **PLASTICITY:** + **SKIN FEEL:** Spread evenly	**OIL GELLING:** +++ **PLASTICITY:** - **SKIN FEEL:** Spread evenly	**OIL GELLING:** +++ **PLASTICITY:** - **SKIN FEEL:** Spread evenly
KEY BENEFITS	 **STICK:** Oil binder and oil gelling. Improves break resistance, decreases fracture tendencies (that are caused by the use of carnauba wax).  **EMULSION:** Consistency modifier, emulsion stability (W/O & O/W).		 **STICK:** Oil binder and oil gelling. Improves hardness, break resistance, temperature stability. Suppresses Castor wax crystallization.  **EMULSION:** Consistency modifier, emulsion stability (W/O & O/W).		

CERTIFICATION / COMPLIANCY

An overview of all products and their certification / compliancy.

CERTIFICATION / COMPLIANCY

An overview of all products and their certification / compliancy.

NAME	CERTIFICATION / COMPLIANCY
BEESWAX YELLOW	
BEESWAX WHITE	
BEESWAX WHITE EP	
BEESWAX YELLOW EP	
SUSTAINABLE BEESWAX	
ORGANIC BEESWAX	
PERMULGIN 3351N	
PERMULGIN 3671	
PERMULGIN 0160	
PERMULGIN 1205	
PERMULGIN 3351	

NAME	CERTIFICATION / COMPLIANCY
NATURAL & VEGAN BLEND	
CARNAUBA WAX T1	
ORGANIC CARNAUBA WAX	
CANDELILLA WAX	
ORANGE PEEL WAX	
SUNFLOWER WAX	
RICE BRAN WAX	
PEG-8 BEESWAX	
CERA BELLINA	
SILICONYL BEESWAX	
BWESTER BW67	

None of our products are tested on animals

NAME	CERTIFICATION / COMPLIANCY
PEG-12 CARNAUBA	
SILICONYL CANDELILLA	
KESTER WAX K82P	
KESTER WAX K82P-VS	
KESTER WAX K82D	
KESTER WAX K82H	
KESTER WAX K72	
KESTER WAX K62	
KESTER WAX K30G	
KESTER WAX K24	

NAME	CERTIFICATION / COMPLIANCY
PERMULGIN 4210	
PERMULGIN 4212	
PERMULGIN 4211	
PERMULGIN 3279	
PERMULGIN 3280	

Legenda

None of our products are tested on animals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