KOSTER KEUNEN



SOLID TO LIQUID IN A BLINK

Kester Wax K-24 is a versatile emollient serves as a non-traditional wax ester, remaining solid at room temperature yet exhibiting performance characteristics akin to liquid esters. Its unique properties make it highly compatible with most cosmetic ingredients, offering formulators a valuable tool in creating innovative personal care products.

KEY FEATURES AND BENEFITS

- Emollient
- Melting Texture
- Slip Agent
- Silicone Alternative
- Reduces Greasiness
- Noncomedogenic Tested: Follicular Biopsy (3rd Party)
- Nonirritant Tested: Follicular Biopsy (3rd Party)
- Reduces TEWL

CLEAN BEAUTY & REGULATORY INFORMATION

Kester Wax K-24 aligns seamlessly with the principles of clean beauty. This palm derived ester contributes to the production of RSPO certified palm oil* and supports natural and sustainable product development. Kester Wax K-24 has an ISO 16128 natural origins index of 1. Its compatibility with natural, clean beauty, and vegan formulations makes it an ideal choice for brands committed to transparency and environmental responsibility.

CERTIFIED SUSTAINABLE PALM OIL™ RSPO CERTIFIED

2-1422-23-100-01

PRODUCT CHARACTERISTICS

INCI Name: Lauryl Laurate

- Typical Usage Levels: 1-50%
- Melt Point: 25C
- Form: Paste
- Package: 20 kg Pails

APPLICATION

Kester Wax K-24 is a highly compatible and versatile ester that can be used in all areas of formulation for leave-on and wash-off applications.

Skin Care

- Emulsions & Lotions
- Baby Care
- Face Care
- Lip Care
- (AP/DEO)
- Sticks & Balms
- Ointments
- Massage Oils
- Sunscreens

Hair Care

- Conditioners
- Shampoos
- Styling Products
- Pomades
- Clays
- Anhydrous Masks
- Chemical Treatments
- Bars

Color Cosmetics

- Lipsticks
- Pencils
- Anhydrous Formulas
- Foundations
- Colored Emulsions
- Pressed Powders
- Lip Balms
- Make-up



CHEMISTRY & FUNCTIONALITY

Rapid Phase Transition & Thermal Dynamics

Mechanism:

- Kester Wax K-24's low melting point (25°C) is a direct result of its specific molecular structure. The short alkyl chains and ester linkage contribute to weak intermolecular forces, facilitating a rapid transition from a crystalline solid to a liquid state upon minimal heat input (skin contact).
- This rapid phase change involves the absorption of latent heat, which can manifest as a subtle cooling sensation. This is a transient endothermic process.

Formula Effect

- This property is crucial for delivering an immediate "slip" effect in formulations. The instant liquefaction provides a smooth, gliding sensation upon application.
- The cooling effect, while subtle, can enhance the sensory profile of products, particularly in warm climates or for products designed for soothing applications.
- This rapid phase transition allows for the product to be easily workable during manufacturing.

Silicone Mimicry & Alternative Chemistry:

Mechanism:

- Kester Wax K-24's low viscosity and spreadability mimic the sensory attributes of low molecular weight, non-volatile silicones (5-60cps). This is achieved through its non-polar, linear molecular structure, which facilitates easy spreading and a smooth, silky feel.
- Unlike silicones, which are synthetic polymers, Kester Wax K-24 is a plant-derived monoester, offering a natural alternative.

Formula Effect

- This property is highly valuable for formulators seeking to create "clean beauty" products.
- This plant derived alternative, offers a product that is more compatible with natural based formulations.

Emolliency & Sensory Modulation

Mechanism:

- As an emollient, Kester Wax K-24 forms a thin, non-occlusive film on the skin's surface. This film lubricates the stratum corneum, reducing transepidermal water loss (TEWL) and enhancing skin hydration.
- The "dry, powdery" feel arises from the specific arrangement of the monoester molecules on the skin. This arrangement minimizes the perception of oiliness while maintaining lubricity.

Formula Effect

- This characteristic allows formulators to create products with a luxurious, non-greasy texture, appealing to consumers who prefer lightweight formulations.
- It enables the creation of balanced formulations where the emollient properties of oils and esters are harnessed without the associated heavy or greasy feel.
- The film that is created is able to help with the even distribution of pigments, and other powder based ingredients.

Formulation Balance

Mechanism:

- Kester Wax K-24's ability to reduce greasiness is attributed to its unique interaction with other oils and esters in a formulation. It acts as a "sensory modifier," altering the perceived texture without significantly affecting the overall lipid profile.
- It helps to disperse and evenly distribute other oils, preventing localized concentrations that contribute to a greasy feel.

Formula Effect

- This property is essential for creating formulations with optimal sensory balance, where the benefits of oils and esters are retained without the undesirable greasiness.
- It allows for greater flexibility in formulation design, enabling formulators to fine-tune the sensory attributes of their products with weightless finished and enhanced skin feel.
- It helps to create a more elegant, and less heavy feeling product.

FORMULATION GUIDELINES

Kester Wax K-24 is a low molecular weight hydrophobic monoester. It is high compatibility with a diverse range of cosmetic ingredients, coupled with its low melting point, contributes to enhanced textures and formulation stability. As a non-irritating and non-comedogenic emollient, Kester Wax K-24 presents a favorable alternative to many other ester oils in skincare and cosmetic applications.

When combined with other oils and esters, Kester Wax K-24 demonstrates the following properties:

Reduces greasiness while provide enhanced emolliency

- Serves as a natural alternative to lightweight silicones.
- Facilitates the formulation of aesthetically pleasing sunscreen products.

In dispersions and powder products, Kester Wax K-24 functions as:

- A substitute for liquid emollients in color dispersions.
- An agent that imparts increased creaminess to powdered formulations

Summer Glow Gloss Stick Formula: # 1/20-258/484/358-5

FEATURES

- Vegan & Natural
- Highlighter provides healthy, dew-kissed glow
- Moisturizing beauty balm

Skin Care
Anhydrous
Natural/ Clean
Vegan

Ingredient Trade Name	INCI Name	%
Phase A		
Sunflower Wax	**Helianthus Annuus (Sunflower) Seed Wax**	**11.0**
AR Cocoa Butter	**Theobroma Cacao (Cocoa) Butter**	**10.0**
Kester Wax K-60P	**Polyhydroxystearic Acid**	**15.0**
Kester Wax K-24	**Lauryl Laurate**	**8.0**
Orange Wax	**Citrus Aurantis (Orange) Peel Wax**	**6.0**
Castor Oil	Ricinus Communis (Castor) Seed Oil	29.0
Jojoba Oil	Simmondsia Chinensis (Jojoba) Seed Oil	12.0
Rice Bran Oil	Oryza Sativa (Rice Bran) Oil	8.0
Vitamin E Acetate	Tocopheryl Acetate	1.0

PROCEDURE

- Combine all ingredients, melt at 80-85 °C and mix until uniform.
- Pour into containers at about 80 °C and cool.

CONCLUSION

Incorporating Kester Wax K-24 into your formulations allows product developers to achieve superior aesthetics, functionality, and consumer satisfaction. Its rapid phase transition, exceptional sensory properties, and versatility across applications make it an indispensable ingredient in modern cosmetic and personal care formulations. Whether optimizing slip, reducing greasiness, or replacing silicones, Kester Wax K-24 provides a plant-derived solution that meets the demands of today's clean beauty market. Elevate your formulations with this multi-functional ester and deliver high-performance products without compromising on feel or efficacy.

KOSTER KEUNEN