

TECHNICAL DATA SHEET

Product Name: Soy Wax

INCI Name: Hydrogenated Soybean Oil

CAS: 8016-70-4

Synonyms: Soy Wax Flakes, Soybean Wax, Vegetable Soy Wax, Natural Soy Wax

Chemical Classification: Hydrogenated triglycerides

Functional Category: Candle making agent, Cosmetic ingredient - emollient in lip balms, lotions, and creams

Description: The production process of soy wax begins with the extraction of soybean oil from soybeans. After extraction, the oil is refined to remove impurities and improve its stability and quality. The refined soybean oil is then subjected to hydrogenation, a process that converts unsaturated fatty acids in the oil into saturated or partially saturated fatty acids. This process occurs in the presence of a catalyst, typically nickel and hydrogen, under elevated pressure and temperature. The goal of hydrogenation is to transform the oil from a liquid to a solid state at room temperature. After hydrogenation, the wax is cooled and filtered to remove any residual catalysts and other impurities. The wax is then shaped into flakes or pellets, facilitating its use and storage. Quality control tests are performed to ensure the consistency and purity of the final product. Soy wax is biodegradable and comes from renewable sources, making it an environmentally friendly alternative to traditional paraffin waxes derived from petroleum. Thanks to its ability to retain fragrances effectively, soy wax is ideal for producing scented candles. Its compatibility with various additives allows for broad application in cosmetic formulations, where it contributes to the stability of emulsions and improves the texture of products. Using soy wax enables the production of formulations with superior performance and aesthetic characteristics, meeting consumer demands for natural and sustainable products.

Benefits:

- **Hydration:** Soy wax is rich in fatty acids that help maintain skin hydration. When used in cosmetic products like lip balms, lotions, and creams, soy wax acts as an

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emollient, softening the skin. The fatty acids in soy wax form a protective layer on the skin, preventing moisture loss and leaving the skin soft and smooth.

- **Natural Ingredient:** Soy wax is natural and biodegradable, making it an eco-friendly choice for cosmetic products. It is derived from renewable sources, which is especially important for consumers who prefer natural and sustainable ingredients in their cosmetics.

- **Fragrance Retention:** One of the main reasons for using soy wax in cosmetics is its ability to retain fragrances. Soy wax can hold larger amounts of fragrance oils compared to other waxes, making it ideal for scented balms, lotions, and other body care products. Fragrances are released gradually, providing a long-lasting and pleasant scent.

- **Gentle on Skin:** Soy wax is known for being gentle on the skin, making it suitable for use in products intended for people with sensitive skin. It does not cause irritation.

- **Stability and Texture:** In cosmetic formulations, soy wax helps stabilize products and improve their texture. When used in creams and lotions, the wax helps achieve the desired consistency, allowing for smooth and pleasant application of the product on the skin.

- **Versatility of Application:** Soy wax is used in a wide range of cosmetic products. In lip balms, it acts as a protective layer, preventing dryness and cracking of the lips. In creams and lotions, it improves hydration and provides a smooth texture. It is also used in hair care products such as balms and masks, where it helps improve the shine and softness of the hair.

- **Candle Making:** Soy wax burns cleanly, with minimal soot production. This means that soy candles produce less smoke and do not leave black marks on walls or other surfaces. This characteristic is particularly important for indoor use, where air quality can be compromised by burning paraffin candles. Unlike paraffin wax, which is derived from petroleum, soy wax has a lower carbon footprint and does not contribute to environmental pollution.

Usage: Soy wax is often used as a base in lip balms due to its emollient properties. It helps create a protective layer on the lips, preventing dryness and cracking. Typical concentrations of soy wax in lip balms range from 10% to 30%. In lotions and creams, soy wax is used as a thickener and emulsifier. It helps stabilize the formulation and improve texture. Concentrations of soy wax in these products usually range from 1% to 10%. Soy wax is also used in soap making, where it contributes to the hardness of the

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soap and creates a creamy lather. Its presence in soap can help hydrate the skin during cleansing. Typical concentrations of soy wax in soaps range from 5% to 20%.

Source Material: Soybean oil

Method of Obtaining: Soybean oil is first extracted from soybean seeds. This oil is the primary source for further production of soy wax. Oil extraction can be done through mechanical pressing or solvent extraction. The raw soybean oil is then subjected to hydrogenation. Hydrogenation is a process in which hydrogen is added to the double bonds in fatty acids, converting them into saturated or partially saturated fatty acids. This is done in the presence of a catalyst, usually nickel, under high pressure and temperature. Hydrogenation increases the melting point of the oil and makes it solid at room temperature, thus creating soy wax.

Animal Testing: Not tested on animals

GMO: Non-GMO

Vegan: Does not contain animal-derived components