

## TECHNICAL DATA SHEET

**Product Name:** Immortelle Infused Oil

**INCI Name:** Helichrysum Italicum (Immortelle) Flower, Helianthus Annuus Seed Oil, Prunus Amygdalus Dulcis Oil, Tocopherol

**CAS:** 8023-95-8, 8001-21-6, 8007-69-0, 59-02-9

**Chemical Classification:** Mixture

**Functional Category:** Skin Conditioning Agent ~ Occlusive, Skin Conditioning Agent ~ Emollient, Antioxidant

**Description:** Immortelle infused oil is obtained through maceration of dried plant material (*Helichrysum italicum* extract) in a suitable carrier oil using the so-called "stove-top" method. The active compounds gradually transfer from the plant extract into the oil base, enhancing its therapeutic potential and medicinal properties. The carrier oil used is cold-pressed linoleic-type sunflower oil, which contains a higher proportion of essential linoleic acid and a lower amount of oleic acid, combined with sweet almond oil. Oil is yellow, odorless, and preserved with Vitamin E to prevent rancidity. Immortelle infused oil is highly valued in natural cosmetics due to its powerful regenerative and soothing properties. It is particularly beneficial for mature, dry, and sensitive skin, as it reduces irritation, improves elasticity, and promotes epidermal renewal. Its bioactive compounds, including flavonoids and sesquiterpenes, work synergistically to reduce redness and inflammation, making it suitable for skin prone to eczema and rosacea. Thanks to its strong antioxidant properties, this oil protects the skin from oxidative stress and premature aging. It neutralizes free radicals and reduces collagen degradation, helping to maintain skin firmness and tone. Its ability to accelerate tissue regeneration contributes to the reduction of scars, pigmentation, and fine lines, making it a valuable ingredient in anti-aging formulations. Its use is not limited to facial care—it is also suitable for massages, where its mild anti-inflammatory action helps relax muscles, reduce tension, and alleviate discomfort in tissues. In body care, it is useful for treating dry and cracked skin, particularly on hands, elbows, and heels.

**Bioactive Compounds:** Immortelle infused oil (*Helichrysum italicum*) is rich in bioactive compounds with regenerative, antioxidant, and anti-inflammatory properties. Key components include flavonoids, sesquiterpenes, acetophenones, phytosterols, and

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phenolic acids. Flavonoids are potent antioxidants that protect the skin from oxidative stress caused by UV radiation and pollution. They stabilize cell membranes and reduce free radical activity, aiding in the reduction of inflammation and the regeneration of irritated skin. Key flavonoids present in immortelle infused oil include kaempferol, quercetin, and apigenin, which help reduce redness, strengthen capillaries, and improve microcirculation. Sesquiterpenes provide anti-inflammatory benefits, reducing swelling and irritation. Immortelle contains high levels of  $\alpha$ -curcumene and  $\beta$ -caryophyllene, which promote regeneration, diminish redness, and accelerate the healing of micro-damage. These compounds make immortelle infused oil suitable for treating scars, stretch marks, and inflammatory skin conditions such as eczema and psoriasis. Acetophenones, such as helichrysin, contribute to the soothing and regenerative effects of immortelle. They exhibit mild analgesic and antimicrobial properties, helping to reduce irritation and prevent infections in damaged skin. This makes immortelle oil beneficial for treating acne and impure skin, as it has antibacterial effects and regulates sebum production. Phytosterols are plant sterols structurally similar to cholesterol. They play a key role in strengthening the skin barrier. The presence of  $\beta$ -sitosterol, campesterol, and stigmasterol enhances hydration and reinforces the skin's protective function. These lipids have anti-inflammatory properties and accelerate regeneration after injuries and irritations. Phenolic acids, such as ferulic and caffeic acid, act as powerful antioxidants. They neutralize free radicals and protect the skin from premature aging by preventing collagen and elastin degradation. This helps maintain skin elasticity and firmness. Ferulic acid enhances the efficacy of vitamins C and E, making it particularly useful in anti-aging cosmetics. It is important to note that certain bioactive compounds, especially flavonoids, acetophenones, and phenolic acids, have limited solubility in oil. Their concentration in infused oil is lower compared to essential oils or alcohol-based extracts.

### Benefits:

- Protects the skin from oxidative stress and premature aging by neutralizing free radicals.
- Reduces redness and irritation due to its strong anti-inflammatory properties.
- Improves microcirculation and strengthens capillaries, contributing to a healthier and more even complexion.
- Promotes skin regeneration, accelerates wound healing, and reduces the appearance of scars.

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- Helps retain moisture by strengthening the skin barrier and reducing water loss.
- Enhances skin elasticity and firmness by preventing collagen and elastin degradation.
  - Regulates sebum production and has antibacterial effects, making it suitable for acne-prone skin.
  - Soothes inflammatory conditions such as eczema, psoriasis, and rosacea by reducing itching and discomfort.
  - Reduces the appearance of fine lines and wrinkles, leaving the skin smooth and revitalized.
  - Improves skin resilience against external factors such as pollution and UV radiation.

**Usage Instructions:** Immortelle infused oil is used as an active ingredient in a wide range of cosmetic formulations. Its application depends on the type of product and the desired effect, with the optimal concentration varying based on the formulation. On moisturizing creams and serums for dry, mature, and sensitive skin, it is typically added at a 5–15% concentration, achieving a balance between regenerative and nourishing effects without an overly greasy feel. In anti-aging formulations, it can be used at higher concentrations, especially in combination with other antioxidant-rich plant oils such as rosehip or argan oil. In treatments for problematic skin, such as acne serums, the recommended concentration is 2–10%, as it reduces inflammation and supports the healing process without clogging pores. In scar and stretch mark treatments, it can be used at 10–30%, combined with other regenerative ingredients like tamanu or calendula oil. For body care and massage blends, immortelle infused oil is usually used at 10–50%, depending on the desired intensity of action. It is also frequently incorporated into nail and cuticle serums, where it is used at full concentration or blended with more potent regenerative oils. Due to its mild and pleasant texture, it can be applied directly to the skin in small amounts, particularly on dry and problematic areas, without the need for additional dilution.

**Animal Testing:** This substance has not been tested on animals.

**GMO Status:** Non-GMO

**Vegan:** Does not contain ingredients of animal origin.

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