

# DEMECARE® ACACIA GUM: The skin architect



The closure of a superficial wound is not the result of cells moving in an isolated and chaotic manner. It is a highly structured group movement called **collective migration**, which generates strong mechanical tensions. Wound healing is only truly complete when the barrier function is fully restored. In skin biology, PKP1 (plakophilin1), PKP3 (plakophilin3), and DSC2 (Desmocollin-2) are the major components of desmosomes, which act as "rivets" that physically connect skin cells to each other.

**Keratin filaments form a three-dimensional network that gives cells their mechanical strength**, and these keratins act as scaffolding platforms to spatially organize cell adhesion complexes.

## SCIENTIFIC CONCEPT

**Demecare® Acacia senegal gum manages the three vital stages of the process of skin repair through closure, strength and impermeability.**

### Closure guardian

#### KRT 6 / KRT 16

In the first few hours after injury, keratins are induced to trigger and direct cell migration in order to close the wound.

### Resistance framework

#### KRT 14 keratin 14 + Desmosomes

During migration, cells undergo significant tension. KRT14 maintains the mechanical integrity of the cells, while desmosomes (PKP 1, PKP 3, DSC 2) attach them securely to each other to prevent breakage. The epidermis thus creates a robust cytoskeleton.

### Skin barrier restoration

#### Involucrin

Once the skin is closed, involucrin creates a shield on the surface. It seals the regenerated epidermis, traps moisture, and permanently blocks the entry of pathogens.

The skin does not simply close, it rebuilds itself by forming a hybrid cytoskeleton (both flexible enough to migrate and strong enough to resist), while maintaining a layer of perfectly bonded cells. Study results indicate that **Demecare® Acacia senegal gum creates an environment for a more robust and functional skin barrier that is capable of withstanding environmental aggression**. It stimulates skin cells to renew more efficiently and strengthen their structure, activates lipid synthesis and protein production to promote natural repair processes, and supports mitochondrial biogenesis for cell vitality and enhanced repair capacity.

## SUGGESTED USES

## Healing &amp; repair


**Targeted care for  
“cracks, and micro-cuts”**

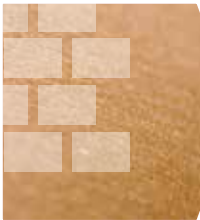
Dermo-soothing serum. For skin that “can no longer tolerate anything” (redness, stinging, burning), this serum acts as a firebreak. It immediately defuses distress signals (S100 alarmins) and boosts cellular antioxidant defenses (SELENOH and SIRT3). Freed from this constant stress, the skin regains its comfort and natural tolerance threshold.

**Post-tattoo and post-cosmetic procedure care**

Protective and fortifying cream. Sensitive skin is often thin skin with a permeable barrier. This cream deeply rebuilds the epidermis. It strengthens the deep foundations (Collagen4), reinforces the cell structure (KRT14/17), and deposits an impenetrable surface cement (TGM3, SPRR3). The skin is insulated from external aggressions, and inflammatory redness disappears.

**Care for mature skin  
“as fragile as paper”**

With age, the skin becomes thin and is easily damaged by the slightest impact (the “parchment skin” effect), with significant delays in healing. Demecare® Acacia senegal restores thickness and resistance to impact and immediately boosts the induction of stress keratins for rapid healing of scratches.



This “repair” approach is based on the fundamental biology of skin wound healing. DemeCare® Acacia senegal gum, managing both the repair process and the strength of new tissue is an extremely strong scientific argument for a dermo-cosmetic brand.

**ABOUT ALLAND & ROBERT:**

Founded in 1884, Alland & Robert is still nowadays a family company, 100% French and based in Normandy, pioneer expert in natural plant exudates. The heritage of our 140-year-old company has shaped our journey and brought us to be the worldwide expert of acacia gum. Our success is based on a strong commitment to sustainable development and a passion for natural ingredients.

**ABOUT DEMECARE:**

Across Beauty & Care segments, we have mastered the art of adding value and pleasure, with natural, plant-based, and scientifically-backed solutions. Our innovative range DemeCare® brings nature and innovation to the forefront of consumers' experiences. Bringing together naturalness with functional and environmental benefits, our Demecare® range meets consumers' desire for natural, simple and ethical skincare and beauty products with shorter ingredient lists backed by science.

All the products in the Demecare® range are made from two plant-based gums: sterculia gum (*Sterculia urens* gum) and acacia gum (*Acacia senegal* gum and *Acacia seyal* gum). The exudates are collected directly from trees and combined in our patented blend.



ALLAND & ROBERT

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Discover more about us: [WWW.ALLANDETROBERT.COM](http://WWW.ALLANDETROBERT.COM)