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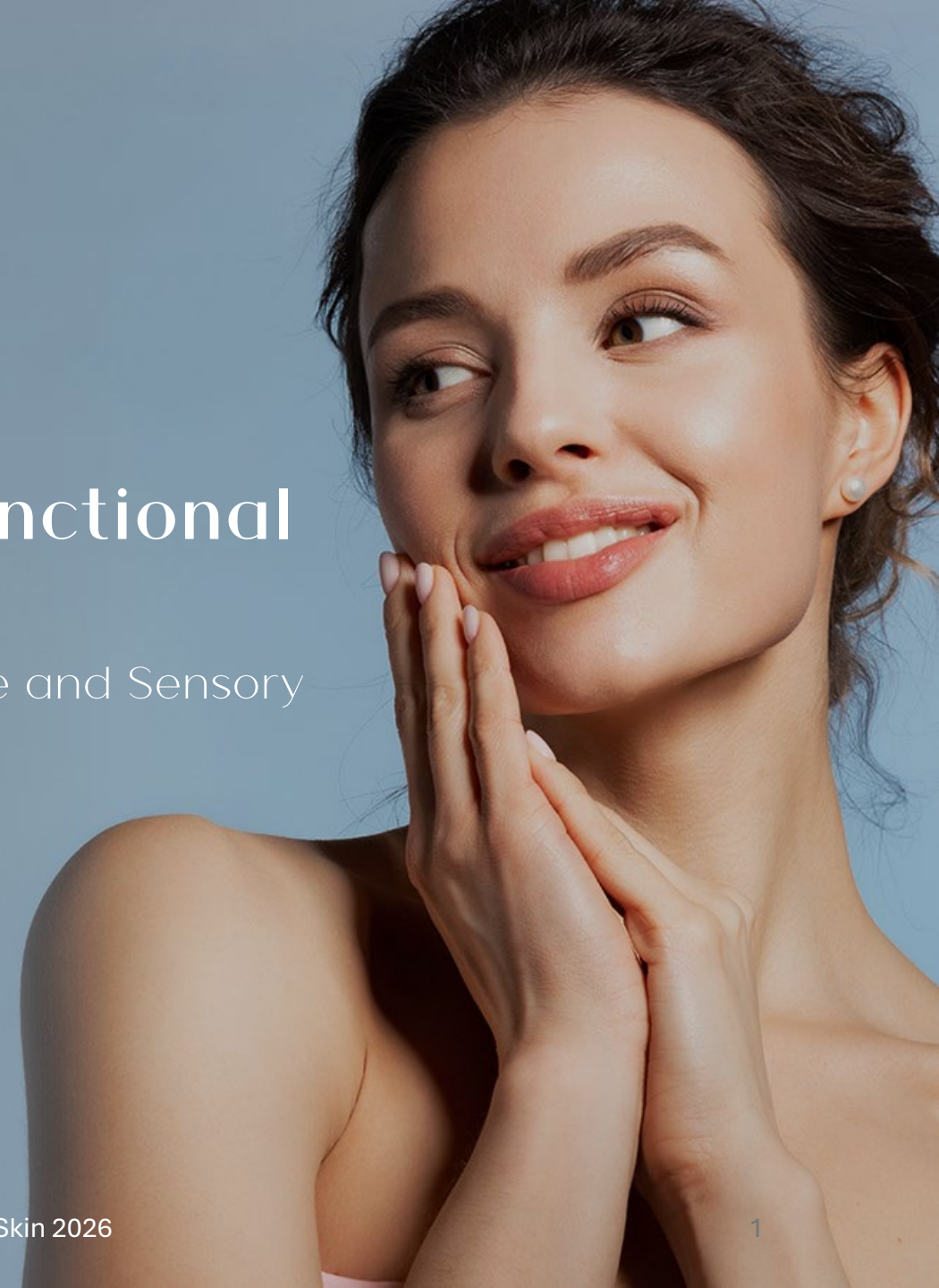


# Engineered zeolites as a multifunctional cosmetic ingredient

Advanced versatile platform for Hair Care, Skin Care and Sensory Performance

Susanna Tardani | Sales Manager Cosmetic Raw Materials

Francesca Masin | Technical Sales Specialist



# SAES Chemicals

Pioneering high-purity, clean chemistry solutions to enhance skin barrier protection and well-being.

In SAES Chemicals S.r.l. we bring cutting-edge science to the worlds of cosmetics and nutraceuticals, developing next-generation functional materials that shape the future of well-being. We deliver what consumers demand: outstanding performance from high-purity products, made with clean chemistry and backed by decades of R&D expertise.

More than

**80**

Tons

Production Capacity  
(Zeolites-based systems)

**17**

Patents Families claiming  
engineered zeolites

**8**

Production sites  
worldwide

**3.300**

sqm

Corporate  
Laboratories

## Our product categories

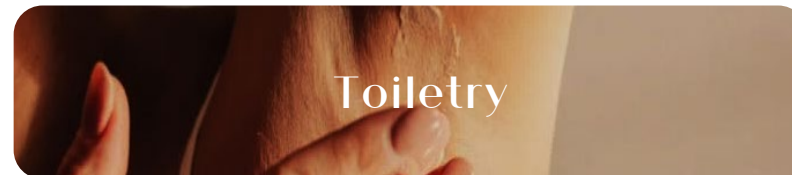
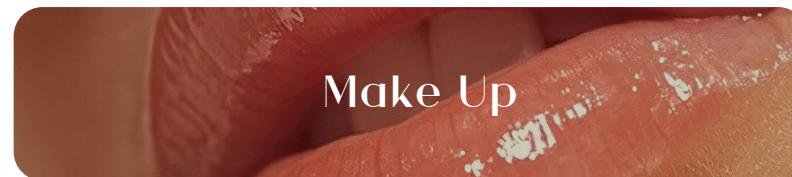
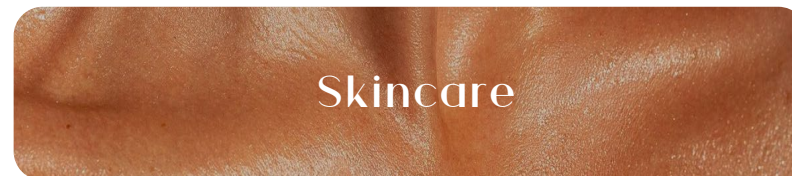
 **ZeoSAES® Fillers**  
TEXTURE AND EXPERIENCE MODIFIER INGREDIENTS

 **ZeoSAES® Actives**  
ACTIVE INGREDIENTS

 **ZeoSAES® Adsorbents**  
ADSORBENT INGREDIENTS

 **ZeoSAES® UV Booster**  
UV BOOSTING INGREDIENTS

## Segments application



## Certifications



**OK Sephora list**

**OK Credo list**

**ISO 14001**

**ISO 9001**

**Heavy metal tested**

OK EU / US / China / Japan /  
South Korea / Mercosur  
Cosmetic regulation

## Texture And Experience Modifiers

Protecting the skin from the exposome is the new pro-age approach.

ZeoSAES Texturizer 5X6010

ZeoSAES Whipped 5X6001

ZeoSAES Soft Focus 5X6006

ZeoSAES NaturGel 5X6100

# ZeoSAES® Texturizer | 5X6010

Texture enhancer

BEST FOR  
SKINCARE • MAKEUP

**INCI**  
Zeolite

An **ideal alternative to traditional powder components**, enhancing the final smooth texture of the formula. It provides a **silky touch, amplifies color payoff, and offers excellent oil absorption**. Acting as a body agent, it improves the consistency without creating foam or a white residue. Additionally, it effectively controls sebum, ensuring a smooth and matte finish while maintaining the overall performance of the product.

**Definition**  
Engineered Zeolite

**70%** stated an  
**extra silky touch**

In pairwise comparison with starch.  
\*Internal panel of 20 women (25 - 55 years old).

**Up to 10% color  
payoff**

Compared to bench formulation with silica. SAES internal method through UV-Vis spectrometer.

**+40% of viscosity  
increased**  
compared to placebo

Measured by Rheometer flow curve, at different shear rates and 25C

## BENEFITS



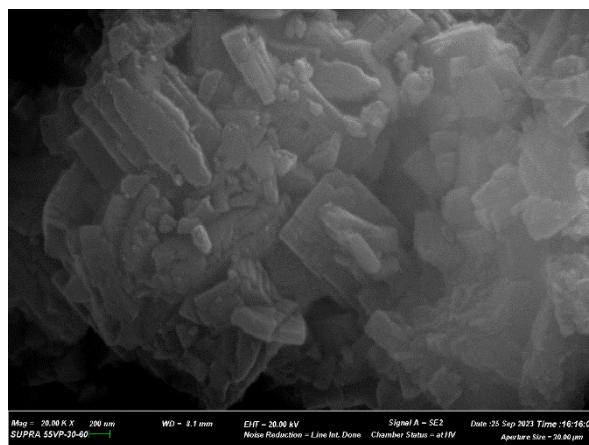
**SILK  
FINISH**



**RICH  
TEXTURE**



**DRY  
TOUCH**



## PRODUCT FEATURES

- **Good dispersibility** in water and oil
- **Soft sensorial feel** and great **spreadability**
- Great **oil absorption** capabilities
- Increases **viscosity** to formulas
- High **compactness** and high **pigmentation**
- **Even colour distribution**, increased **payoff**
- **No fallout and improved compactness**

# ZeoSAES® Whipped | 5X6001

Texture transformer.

BEST FOR  
SKINCARE • MAKEUP • HAIRCARE and COLOR

**INCI**  
Zeolite

**Definition**  
Engineered Zeolite

A perfect alternative to traditional powders, enhancing the texture of the formula. It provides a **silky, velvety sensory feel** and, with its high hydrophilicity, forms a network that thickens the formula while aiding in suspension. It effectively **controls sebum, increases color depth, and offers a weightless texture**. When desired, it delivers a whipped finish for a seamless, flawless application, ensuring smoothness without foam or white residue.

**80%\*** stated an enhanced whipped sensation

In pairwise comparison with bench formulation.  
\*Internal panel of 20 women (25 - 55 years old).

## BENEFITS



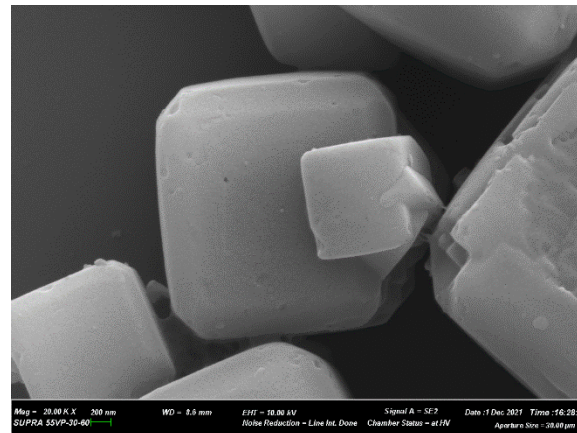
**WEIGHTLESS/WHIPPED TEXTURE**



**FAST ABSORPTION and LONG LASTING**



**INCREASED COLOR PAYOFF**



## PRODUCT FEATURES

- **Good dispersibility** in water and oil
- **Great foaming agent**, providing a **whipped texture** into O/W formulas
- **Creamy feel** and **texture**
- **Long lasting function**
- **Exothermic reaction**

# Comparative Tests

ZeoSAES® Whipped



ZeoSAES® Whipped:

- color retention
- maintains stability
- improves deposition
- pH maintained at 10-10.5
  
- Reduce NH3 and MEA

## On-going evaluations

### Chelating Systems

H<sub>2</sub>O<sub>2</sub> stabilization and Fe/Cu metal control

### Anti-Fading Systems

- SLES vs mild surfactants
- Improved wash fastness & color retention

### Thermal Protection

Heat-shielding and protective film systems

### Anti-Pollution

Adsorption of environmental pollutants

# Compatibility with current oxidative color architectures

ZeoSAES® Whipped

## Oxidative dye precursors

p-Phenylenediamine (PPD)  
p-Aminophenol derivatives  
Pyrazole derivatives  
Nitro dyes  
Resorcinol couplers  
2-Methylresorcinol  
Substituted resorcinols / pyrazolic couplers  
Direct dyes  
HC Red No.3  
Basic Yellow 87  
Basic Blue 124  
HC Blue systems

## Lipophilic and Emulsifiers

Cetyl Alcohol  
Non-ionic emulsifiers  
Emollients & oils  
Isopropyl Palmitate  
Sunflower Oil  
Cetearyl Alcohol

## Polymers

Conditioning polymers  
Guar Hydroxypropyltrimonium Chloride  
Hydroxypropyl Methylcellulose  
Xanthan Gum  
Carbomer systems  
Acrylates/C10-30 systems

## Surfactant systems

SLES (Sodium Laureth Sulfate)  
SLS (Sodium Lauryl Sulfate)  
Mild surfactants  
Amphoteric surfactants (CAPB)  
Non-ionic surfactants  
Anionic surfactants  
Sarcosinate surfactants  
Cocamidopropyl Betaine  
Sodium Lauroyl Glutamate  
Sodium Cocoyl Isethionate (SCI)

# ZeoSAES® Soft Focus | 5X6006

Matte redefined.

BEST FOR  
SKINCARE • MAKEUP • HAIRCARE and COLOR

## INCI

Zeolite

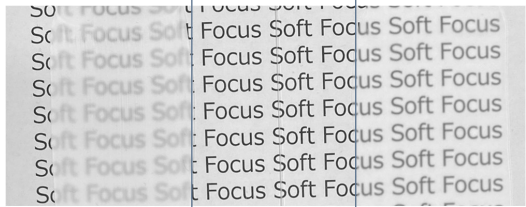
Infused with a **powerful blurring effect**, this powder provides **subtle and natural coverage**. Perfect for concealing skin imperfections with a soft-focus effect, it mattifies and evens out skin tone. With its high hydrophilicity, it forms a network that thickens the formula, aids in suspension, and helps control sebum, offering **improved compacting properties and enhanced performance**.

## Definition

Engineered Zeolite

## ZeoSAES® Soft Focus

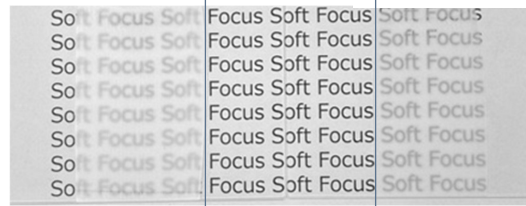
Silicon  
Powder



ZeoSAES® Soft Focus delivers a better soft-focus effect compared to the Silicon Powder

## ZeoSAES® Soft Focus

PMMA  
Powder



ZeoSAES® Soft Focus delivers the same soft-focus effect as the PMMA Powder

## BENEFITS



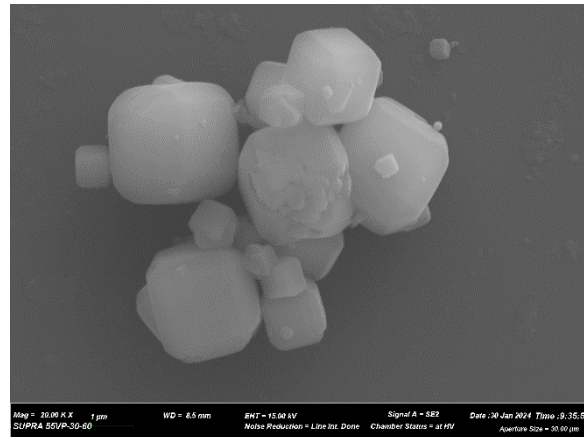
**MATTE  
FINISH**



**BLURRING EFFECT**



**GOOD  
COVERAGE**



## PRODUCT FEATURES

- Good **dispersibility** in water and oil
- No gelling capabilities in oil allows perfect texturing powers in anhydrous formulation
- Great **opacifying** capabilities
- Better **compacting** performance than Cotead Silica
- Optimal **soft focus agent**
- Even **color distribution, no fallout**

# ZeoSAES® NaturGel | 5X6100

Flawless application with a radiant glow.

BEST FOR  
SKINCARE • MAKEUP

## INCI

Capryl/Capric Triglyceride, Zeolite

Transform your skincare routine with our advanced formula, featuring engineered zeolite in a smooth, translucent gel that glides effortlessly onto the skin, delivering a radiant, glowing finish.

## Definition

Engineered Zeolite

Its stable, non-powdery texture reduces waste, while eco-friendly ingredients make it a sustainable choice for both your skin and the planet.

## BENEFITS



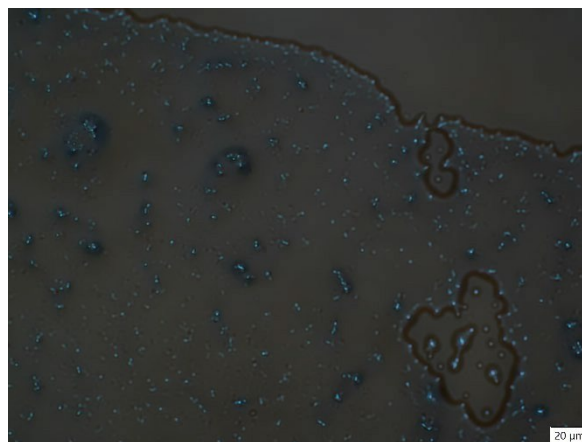
**ENHANCED SENSORY EXPERIENCE**



**CLEAN FORMULATION**



**SUSTAINABLE INNOVATION**



## PRODUCT FEATURES

- Effortless application and glowing finish
- Ultra-smooth, translucent gel texture
- Easy powder dosing
- Reduce dustiness and waste
- Non-powdery consistency
- Sustainable and eco-friendly

**64% natural origin**  
ISO 16128

A high-performance cosmetic ingredient with 64% naturally derived content.

## Exposome-driven aging

Protecting the skin from the exposome is the new pro-age approach.

ZeoSAES Active Antiox A 5X6200

ZeoSAES Active Antiox C 5X6201

ZeoSAES Active Energy C 5X6203

## ZeoSAES® Active Antiox A | 5X6200

Antioxidant-loaded zeolite for active texture & protection

BEST FOR  
SKINCARE • MAKEUP • SCALP CARE • SPF BOOST

### INCI

Zeolite, Ascorbyl Glucoside, Niacinamide, Citric Acid

### Definition

Engineered Zeolite

### Loading:

20% + 20%

Multifunctional ingredient, delivering the many sensorial benefits of zeolite while providing all the advantages of **Vitamins C and B3**. Thanks to the innovative Made in Italy delivery system, hydrophilic vitamins act more effectively due to **enhanced stability**. It can be used in both anhydrous and water-based formulations thanks to its intrinsic versatility.

### BENEFITS



SCAVENGER FOR  
WELL-AGING



CUSHION  
EFFECT



BLURRING  
EFFECT

### WHY IT STANDS OUT

- **Multifunctional** ingredient, texturizing and antioxidant boosting.
- Delivery of hydrophilic Vitamins C and B3 in both lipophilic and hydrophilic systems.
- Protection against **free radicals from the exposome**.
- Supported claims: sebum control, skin balance, wrinkle reduction, microbiome balancing, whitening effect, and more.
- **Tested in vivo** on both Caucasian and Asian skin at 2.5%.
- Perfect for emulsions and anhydrous formulations

### EX-VIVO TEST

2,14x  
at 0,2 mg/mL

3,45x  
at 0,04 mg/mL

Ex-vivo testing showed that ZeoSAES® Active Antiox A provided significantly higher antioxidant protection than Vitamin C + B3, even at lower concentration.

# ZeoSAES® Active Antiox A | Clinical test

| No. |              | Week 0 | Week 2 | Week 4 |
|-----|--------------|--------|--------|--------|
| 3   | Test Area    |        |        |        |
|     |              |        |        |        |
|     | Control Area |        |        |        |
|     |              |        |        |        |

**-13%**  
**MELASMA REDUCTION**  
 after 4 weeks

**-10%**  
**MELANIN REDUCTION**  
 after 4 weeks

| No. |                              | Before SLS Treatment | 24 hours after SLS Treatment | 48 hours after SLS Treatment |
|-----|------------------------------|----------------------|------------------------------|------------------------------|
| 19  | Test Area                    |                      |                              |                              |
|     | Control Area (Placebo)       |                      |                              |                              |
|     | Control Area (Comparison)    |                      |                              |                              |
|     | Control Area (Non-treatment) |                      |                              |                              |

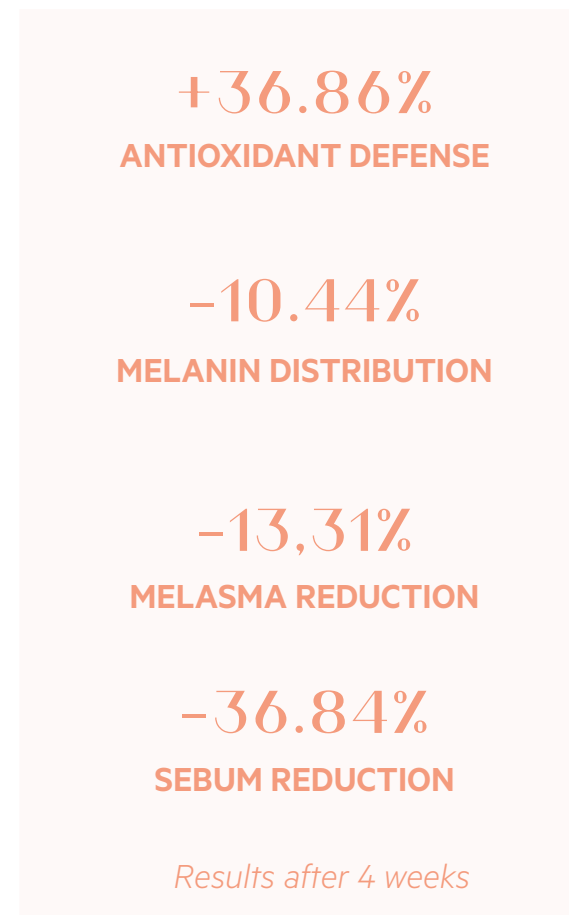
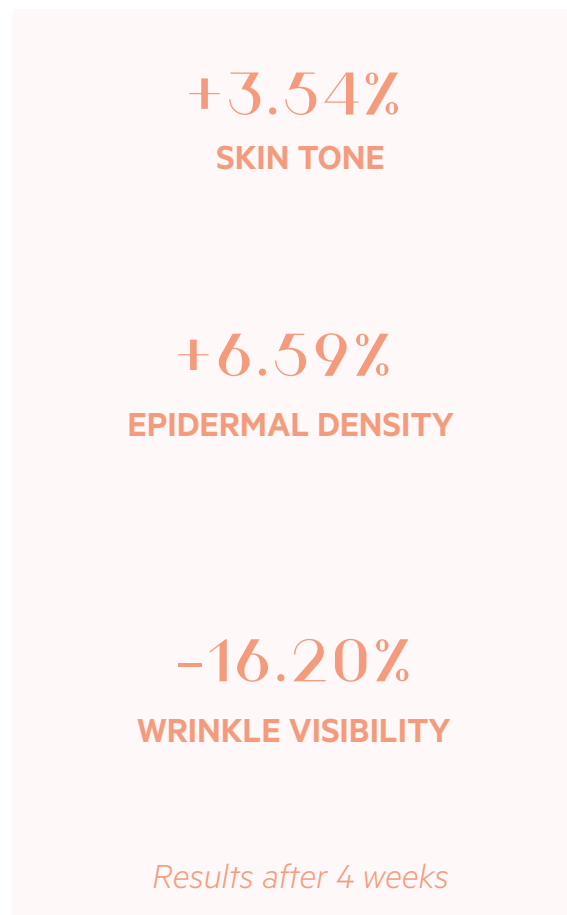
**-58%**  
**SKIN ROUGHNESS**  
 ( $\Delta Ra$ )

**-55%**  
**TRANSEPIDERMAL WATER LOSS**  
 ( $\Delta TEWL$ )

**-50%**  
**SKIN REDNESS**  
 ( $\Delta a$ -value)

20 Korean volunteers aged between 50 and 60 tested a cream containing 2.5% ZeoSAES® Active Antiox A vs. placebo for 28 days.

## ZeoSAES® Active Antiox A | Clinical results



20 Korean volunteers aged between 50 and 60

## ZeoSAES® Active Antiox C | 5X6201

Photo-resilient antioxidant system.

BEST FOR  
SKINCARE • MAKEUP • SPF BOOST

| INCI                                     | Definition         | Loading: |
|--|--------------------|----------|
| Zeolite, Ascorbyl Glucoside, Citric Acid | Engineered Zeolite | 40%      |

An advanced antioxidant system combining stabilized **Vitamin C and zeolite** to deliver **continuous protection against oxidative stress** (ROS) in real outdoor conditions. Engineered to perform under **daily environmental aggressors** such as pollution and UV exposure, it helps maintain skin integrity while visibly improving skin appearance.

### BENEFITS



ENVIRONMENTAL  
DEFENSE



SKIN CLARITY &  
BALANCE



SMART ACTIVE  
DELIVERY

### WHY IT STANDS OUT

- **Proven efficacy against pollution-induced oxidative stress**
- **Effective under combined pollution and UV exposure**
- **Photo-resilient antioxidant performance:** Stabilized system ensures consistent antioxidant activity, even under light exposure.
- **High skin compatibility:** Gentle on the skin, suitable for daily use and sensitive skin types.
- **No cytotoxicity detected:** Scientifically validated safety profile.

### REAL OUTDOOR STRESS

**-56%**

ROS

Compared to the untreated area

### URBAN POLLUTION

**-45%**

ROS

Compared to the untreated area

*In-vitro results*

## ZeoSAES® Active Antiox C | Clinical Tests in-vivo

The efficacy of ZeoSAES® Active Antiox C was evaluated to assess the wrinkles, seborrhea, skin uniformity, texture, brightness, smoothness and imperfections.

**Conducted in half-face on 20 volunteer for 28 days of daily product use.**

**-35%**

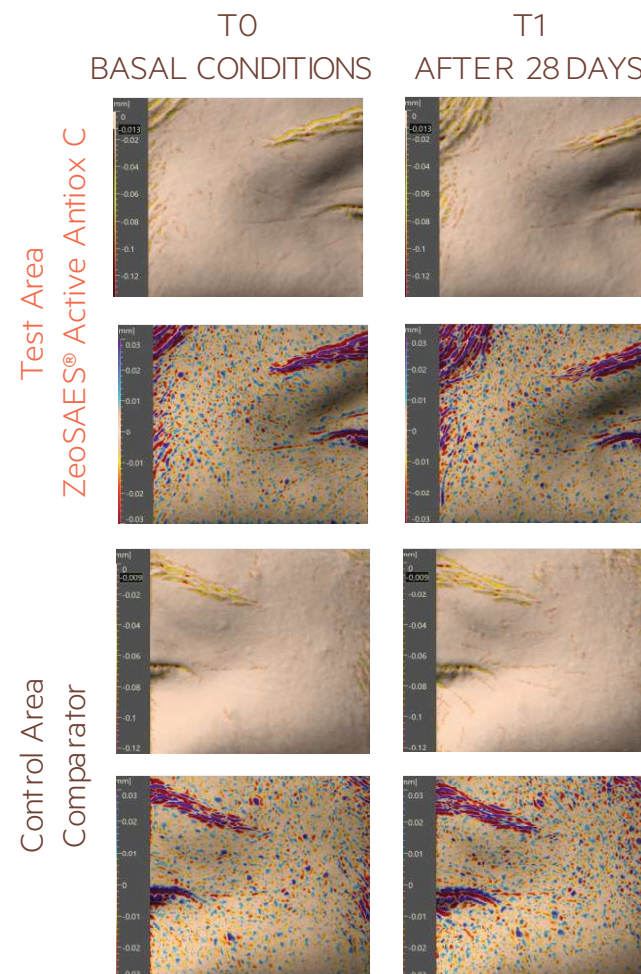
**SEBORRHEA**

**-37%**

**VISIBLE  
IMPERFECTIONS**

**-19%**

**SHINE  
REDUCTION**  
variation of DSC  
(Diffuse Scattering Correction)  
parameter



ANTERA  
Wrinkles and Texture

# ZeoSAES® Active Energy C I 5X6201

Photo-resilient antioxidant system.

## INCI

Zeolite, Caffeine, Citric Acid

## Definition

Engineered Zeolite

## Loading:

20%

Designed to regulate how caffeine interacts with biological tissues, rather than simply increasing its concentration. By modulating release, the system enables a more efficient and sustained activity across different skin and scalp compartments.. This engineered system enhances functional persistence, optimizes tissue responsiveness, and improves overall efficacy.

## BENEFITS



ENHANCE CELLULAR RESILIENCE



PROTECTS KERATINOCYTES



REDUCES INTRACELLULAR ROS

## WHY IT STANDS OUT

- **Controlled -not passive- delivery of caffeine**
- **Optimized interaction with biological targets**
- **Sustained functional activity over time**
- **Multi-compartment efficacy (skin + scalp)**, performs across different biological environments
- **Moves from stimulation to regulated tissue responsiveness**, shifts caffeine's role from simple stimulation to a more balanced and controlled biological response.
- Perfect for emulsions, serums and gel-like formulations

BEST FOR  
SKINCARE • MAKEUP • SCALP CARE • SPF BOOST

## BIOLOGICAL ACTIVITY

**+33%**

0,15% concentration

**+21%**

0,03% concentration

compared to oxidative stress control (CTR+)

## ROS NEUTRALIZATION

**-10%**

0,15% concentration

**-12%**

0,03% concentration

compared to oxidative stress control (CTR+)

*In-vitro results*

## On-going | Hair Loss Treatment

To evaluate the efficacy and tolerability of a topical treatment in subjects with androgenetic alopecia.

### Study population

66 male and female subjects (18–65 years) with mild-to-moderate androgenetic alopecia

### Study design

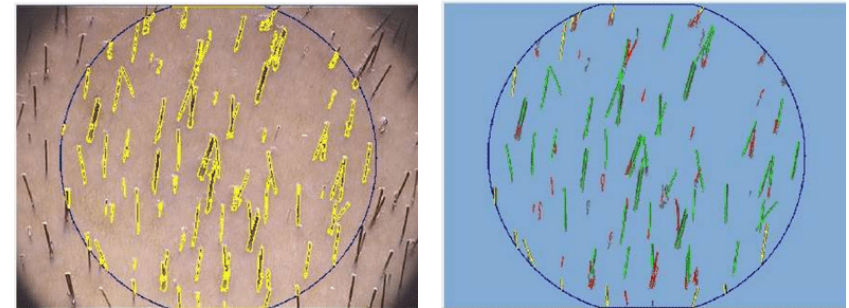
Randomized, placebo-controlled, 3 parallel groups

### Study duration

84 days

### Main Assessments

- Hair density and diameter
- Hairline and scalp coverage analysis
- Expert clinical scoring of hair density improvement
- Subject self-assessment questionnaire (efficacy, tolerability, pleasantness)



*TrichoScan® phototricogram example*

# Coffea Regenera™

BEST FOR  
SKINCARE • MAKEUP

## INCI

**Coffea Arabica Seed Extract**

NOI = 1

## CHARACTERISTICS

- Structurally preserved extract
- Complete phytocomplex
- Not an isolated molecule
- Natural biochemical synergy maintained
- A holistic botanical system designed for multifunctional skin performance

## BIOACTIVE COMPOSITION

Rich in:

- **Hydroxycinnamoyl-quinic acids**
- **Polyphenols**
- **Antioxidant compounds**

Naturally occurring molecules known for protective and longevity-supporting activity.

## ONGOING TESTS

Antioxidant activity on tissues  
Anti-pollution with urban dust

Protection from blue light  
Stimulates collagen + elastin



**Silverskin**, the thin tegument protecting the coffee bean during growth—naturally rich in polyphenols and antioxidants.



## Appearance & Sensory Profile

Natural brown tonalities adaptable across skin tones.



Mattifying effect



Soft-focus finish



High coverage



Iron oxide reduction



Partial TiO<sub>2</sub> alternative



## Smart Deodorant Care

The new frontier in odor control,  
effective up to 72 hours and suitable  
for even the most demanding skin.

ZeoSAES DeoPrecision 5X6023

ZeoSAES UltraPrecision 5X6025

# ZeoSAES® DeoPrecision | 5X6023

Rewriting the rules of odor protection.

BEST FOR  
**HAIRCARE • ADSORBENT**

**INCI**  
Zeolite

A high-performance deodorant booster delivering **up to 73% odor reduction and 72h freshness**, while preserving **skin balance and comfort**. Designed for **modern formulations**, it absorbs malodor at the source, ensures a **clean dry feel, and is gentle enough for daily use**.  
**Confidence that lasts: all day, every day.**

**Definition**  
Engineered Zeolite

## BENEFITS



**GENTLE AND PLEASANT SENSATION**



**FAST DRYING**



**ODOR REDUCTION**

## WHY IT STANDS OUT

- **Skin-friendly** alternative to traditional deodorants
- **Proven 72h freshness**
- Targets **the root cause** of sweat-related odor
- Helps **preserve skin balance** and reduce irritation risk
- Clean, dry feel with no stickiness or staining
- **Ideal for stick and roll-on formats**

HIGH LEVEL OF ABSORPTION OF

### isovaleraldehyde

fermented, cheese-like odor

### 3-Methyl-3-sulfanylhexanol

sulfurous, cooked cabbage-like odor

### trimethylamine

strong amine, fish-like odor

Up to

**+73%**

**ODOR REDUCTION**

Compared to standard zeolites through Gas Chromatography test

Up to

**72h**

**UNDERARM MALODOR REDUCTION**

In-vivo clinical test

## Comparative Test I Surfactant Odor Reduction

Evaluate if ZeoSaes Deo Precision can reduce the unpleasant odor typically associated with surfactant systems, and assess its potential for controlling sulfur/hydrogen sulfide-related odors in haircare and dyes formulations.

We developed a shampoo with SAL6-8 with ZeoSAES Deo Precision (**1%**) and without (Placebo)

### Surfactants Tested

Single surfactant added at **approximately 20%:**

- **Cocamidopropyl Betaine** (30% aqueous solution)
- **Sodium Lauroyl Glutamate** (35% aqueous solution)
- **Sodium Cocoyl Isethionate** (30% aqueous solution)

Evaluation performed by **3 volunteers**

### Key Findings

ZeoSAES DeoPrecision reduced the typical unpleasant surfactant odor versus placebo.

Odor reduction observed at:

- 48 hours
- 1 week

**Most significant effect observed with:**

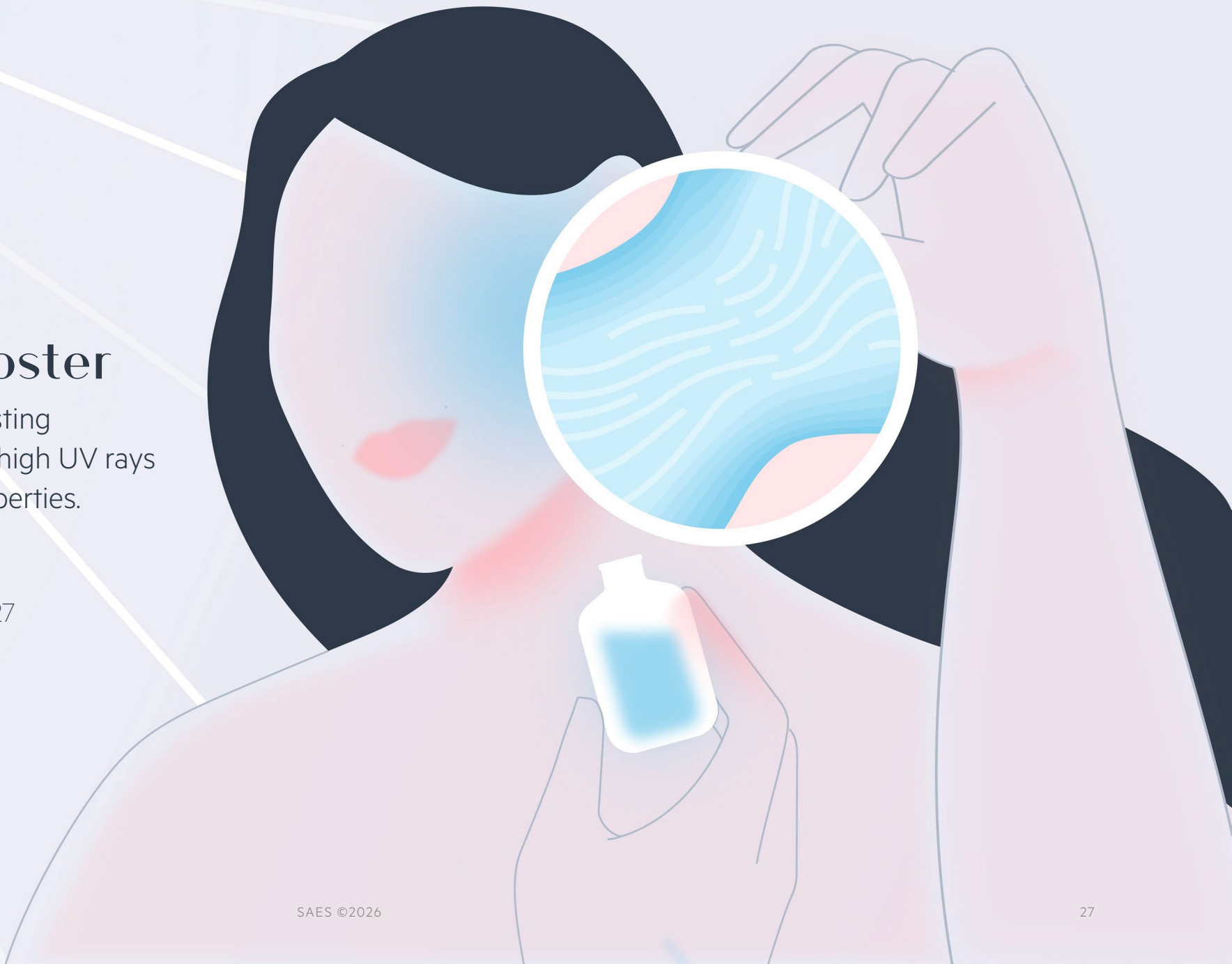
- **Cocamidopropyl Betaine**

# ZeoSAES® UV Booster

The first specialty zeolite UV Boosting ingredients. All-in-one ingredient, high UV rays scattering and great sensorial properties.

ZeoSAES® UV Booster 5X6015

ZeoSAES® UV Booster Evolution 5X6027



# ZeoSAES® UV Booster | 5X6015

Safe and effective SPF booster

BEST FOR  
SKINCARE • MAKEUP • SPF BOOST

**INCI**  
Zeolite

**Definition**  
Engineered Zeolite

The first inorganic UV booster derived from engineered zeolites. It provides excellent UV-boosting performance by scattering UVA and UVB rays, allowing:

- A reduction in the amount of UV filters needed in the formulation
- Enhanced UV light absorption by UV filters.

It also delivers a pleasant sensorial feel on the skin thanks to its texturizing properties



Up to  
**+55%**  
SPF Boosting

Up to  
**+36%**  
SPF Boosting

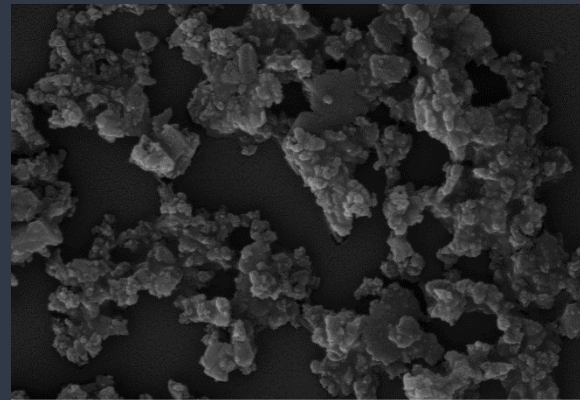
**in vitro**  
ISO 23675:2025

**in vivo**  
ISO 24444:2019

## BENEFITS

**RICH TEXTURE**

**DRY TOUCH**



Mag = 20,00 K X 700 nm WD = 9.7 mm EHT = 10.00 kV Signal A = SE2 Date: 13 Mar 2023 Time: 11:28:35 SUPRA 55VP-XL-60 Noise Reduction - Line Int. Done Chamber Status - at HV Aperture Size - 30.00 µm

## PRODUCT FEATURES

- Water and oil **dispersable**
- Highly compatible with **all SPF range**
- Strong **rheology modifier**, increasing body and improving density
- Increased **sebum control**
- Increased **oil and sweat absorption**
- **Compatible with chemical filters**

**3%**

Ingredient in formulation

Compatibility and efficacy tested:

**2**

physical filters  
*Titanium Dioxide*  
*Zinc Oxide*

**10**

chemical filters

# ZeoSAES® UV Booster Evolution | 5X6027

Next-gen versatility & robustness

BEST FOR  
SKINCARE • MAKEUP • SPF BOOST

**INCI**  
Zeolite

**Definition**  
Engineered Zeolite

Formulation freedom unlocked: delivering reliable, reproducible SPF boosting across today's most complex systems.

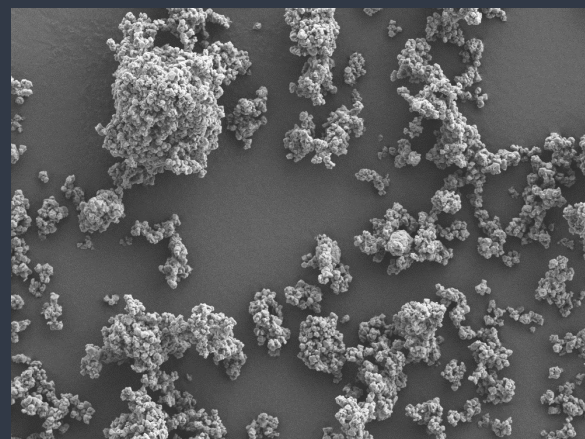
It also combines sensorial application on skin thanks to its texturizing properties.



## BENEFITS

 RICH  
TEXTURE

 DRY  
TOUCH



## PRODUCT FEATURES

- Outstanding formulation compatibility, works seamlessly with both lipids and polymers.
- Reliable and reproducible SPF boosting, consistent performances in vitro / in vivo correlation.
- Designed for modern systems, including high-water, polymer-rich, and hybrid textures.
- Versatility for next-generation skincare. Ideal for SPF skincare, hybrids, and clean beauty formulations.
- Minimizes instability issues such as phase separation or rheological collapse, accelerating development.

Up to  
**+77%**  
SPF Boosting

**in vitro**  
ISO 23675:2025

Up to  
**+29%**  
SPF Boosting

**in vivo**  
ISO 24444:2019

**3%**

Ingredient in  
formulation

Compatibility and efficacy tested:

**10**  
chemical filters

**On-going**  
Physical filters

| Product                      | Hair Care & Color | Scalp Care   | Skin Care | Make-up | Adsorbent | SPF Boosting | Controlled release |
|------------------------------|-------------------|--------------|-----------|---------|-----------|--------------|--------------------|
| ZeoSAES Texturizer           |                   |              | •         | •       |           |              |                    |
| ZeoSAES Whipped              | •                 |              | •         | •       |           |              |                    |
| ZeoSAES Soft Focus           | •                 |              | •         | •       |           |              |                    |
| ZeoSAES NaturGel             |                   |              | •         | •       |           |              |                    |
| ZeoSAES Antiox Active A      |                   | •<br>ongoing | •         | •       |           | •            | •                  |
| ZeoSAES Antiox Active C      |                   |              | •         | •       |           | •            | •                  |
| ZeoSAES Antiox Energy C      |                   | •<br>ongoing | •         | •       |           | •            | •                  |
| Coffea Regenera              |                   |              | •         | •       |           |              |                    |
| ZeoSAES DeoPrecision         | •                 |              |           |         | •         |              |                    |
| ZeoSAES UV Booster           |                   |              | •         | •       |           | •            |                    |
| ZeoSAES UV Booster Evolution | •                 |              | •         | •       |           | •            |                    |



x



# Thank you

[susanna.tardani@saeschemicals.com](mailto:susanna.tardani@saeschemicals.com)

[francesca.masic@saeschemicals.com](mailto:francesca.masic@saeschemicals.com)

[info@saeschemicals.com](mailto:info@saeschemicals.com)

