



COSMOS APPROVED

EcoSmooth™ Rice Husk Cosmetic Powder

The Ingredient of Choice for the Eco-conscious Consumer

What's better than a cosmetic powder that provides multifunctional benefits such as soft focus, sebum absorption and sensorial benefits? One that does it sustainably. EcoSmooth™ Rice Husk Cosmetic Powder is a new amorphous silica upcycled from rice agriculture by-product feedstock. This new silica is an optical and sensory enhancer that can be used in a variety of applications, including skin care, color cosmetics, and hair care. It can be easily incorporated into either the oil phase or the water phase of formulations and is compatible with a large array of product formats such as sticks, creams, lotions, primers, loose or compact powders.

Typical Properties	
Appearance	White powder
SiO ₂ content, ignited basis (%)	> 98
Whiteness index (%)	> 90
Recommended use level (%)	0.5 - 10
D50 (µm)	4 - 7
pH suspension at 5%	5 - 7.5
Surface area (m ² /g)	500 - 700
Shelf life	2 years
Natural Origin Content (ISO Standard 16128-2:2017)	100%
GMO status	Non-GMO
China compliance	Listed in the catalog of cosmetic ingredients

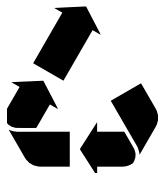


<p>Performance</p> <ul style="list-style-type: none"> • Optical benefit • Sensorial benefit • Water absorption • Sebum absorption • Humectancy benefit • Compaction benefit • Alternative to traditional mineral-sourced silica • Alternative to polymethyl-methacrylate (PMMA) and Nylon-12 powder 	<p>Natural Positioning</p> <ul style="list-style-type: none"> • Natural source • Upcycled feedstock • Plant origin • ISO 16128 <p>Regulatory</p> <ul style="list-style-type: none"> • Non-GMO • No microplastic
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Where sustainability, performance and consumer needs converge



Natural source rice husk



Upcycled ingredient



Optical soft-focus and sensorial benefits



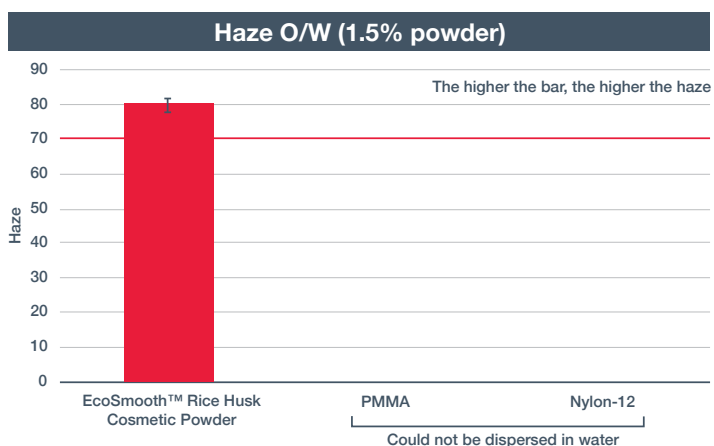
Water and sebum absorption

Performance in application

In vitro optical

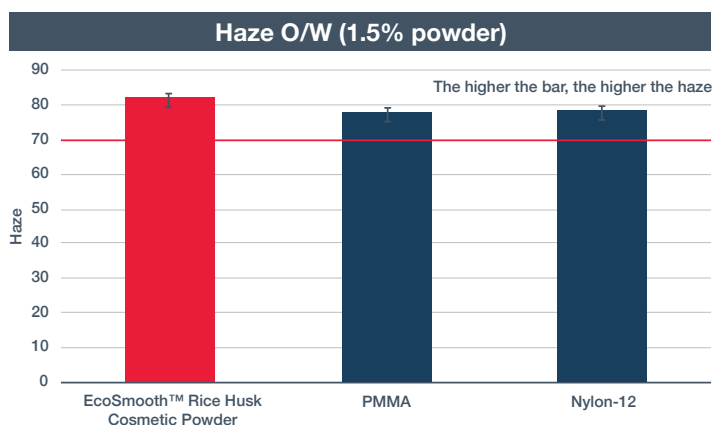
Haze data (silica in water phase)

When formulated at 1.5% in the water phase, EcoSmooth™ Rice Husk Cosmetic Powder delivers haze



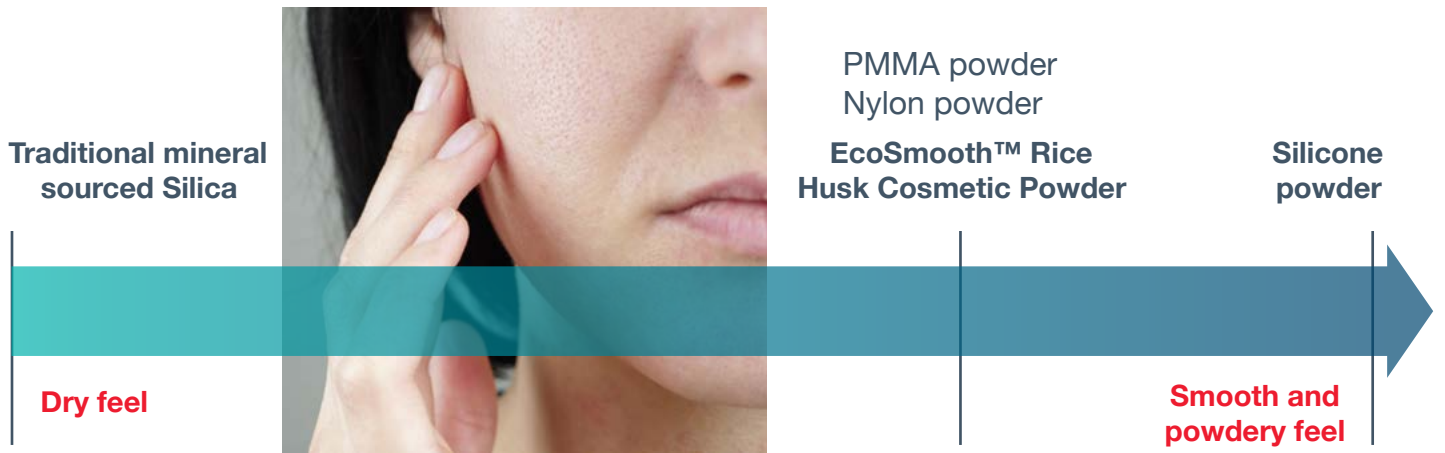
Haze data (silica in oil phase)

When formulated at 1.5% in the oil phase, EcoSmooth™ Rice Husk Cosmetic Powder provides a higher haze than PMMA and Nylon-12

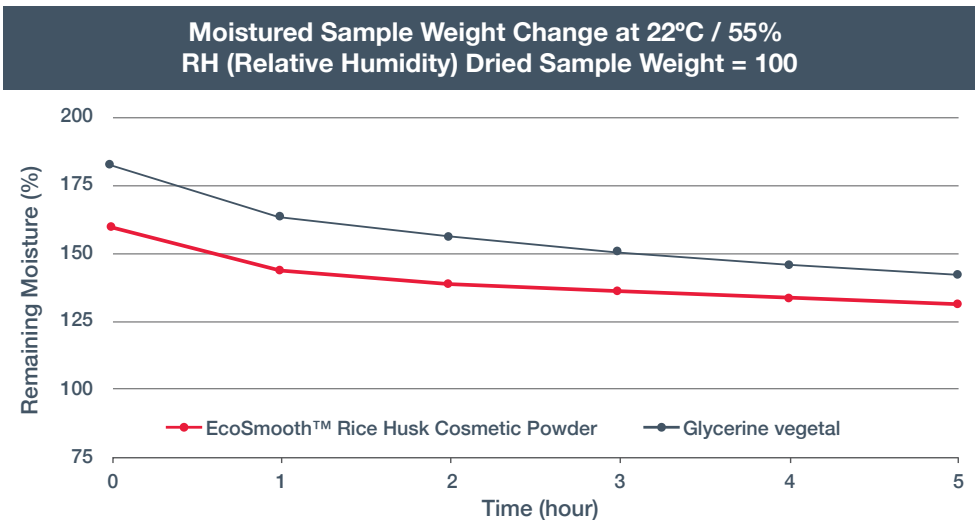


To have soft focus benefit in vivo, haze needs to be ≥ 70

Sensory



Humectancy benefit



EcoSmooth™ Rice Husk Cosmetic Powder

- Absorbed 159% moisture (time 0)
- Retained 131% moisture after 5 hours

Glycerine retained 141% moisture after 5 hours

Test Conditions

- Sample dried in oven 3h at 105°C
- Sample exposed 4h at 45°C and 90% relative humidity (RH) = Time 0
- Record moisture % during 5h at 22°C and 55% RH

Compaction benefit

Neat Powder	Weight Loss (%)
EcoSmooth™ Rice Husk Cosmetic Powder	0.4
PMMA	Not possible to compact
Nylon-12	0.1

Drop test conditions:

- Neat powder compressed in metal cup (triplicate)
- Drop the cup 3 times from 30 cm high
- Record weight (before/after drop test)
- Weight lost to be < 10%

Formulation

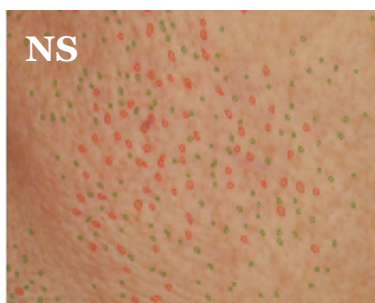
touchedeRIZ CPF #4536 – Anhydrous primer

Immediate and long-term pore masking

Phase	Trade name / Supplier	INCI name	Wt%
A	Beeswax White/Henry Lamotte	Cera Alba	15.00
	Cetiol Ultimate/BASF	Undecane (and) Tridecane	43.75
B	Unipure White LC 987 BA/ Sensient Cosmetic Technologie	CI 77891 (and) Persea Gratissima (Avocado) Oil (and) Hydrogenated Vegetable Oil (and) Tocopherol	0.69
	Unipure Yellow LC 182 BA/ Sensient Cosmetic Technologie	CI 77492 (and) Persea Gratissima (Avocado) Oil (and) Hydrogenated Vegetable Oil (and) Tocopherol	0.035
	Unipure Black LC 989 BA/ Sensient Cosmetic Technologie	CI 77891 (and) Persea Gratissima (Avocado) Oil (and) Hydrogenated Vegetable Oil (and) Tocopherol	0.003
	Unipure Red LC 181 BA/ Sensient Cosmetic Technologie	CI 77491 (and) Persea Gratissima (Avocado) Oil (and) Hydrogenated Vegetable Oil (and) Tocopherol	0.022
C	EcoSmooth™ Rice Husk Cosmetic Powder/Dow	Silica	3.00
	DOWSIL™ EL-TIPS Silicone Elastomer Blend/Dow	C13-15 Alkane (and) Dimethicone/ Vinyl Dimethicone Crosspolymer	37.50

Procedure

- Add phase A ingredients in a beaker in a water bath. Start heating to 60 - 65°C and mix until homogeneous
- Grind phase B ingredients together until a homogeneous color is obtained
- Add phase B to phase A under mixing
- Add phase C ingredients in order listed, mixing well between each addition until homogeneous
- Remove the water bath and start cooling down to room temperature with mixing



Time table	Number of fine pores	Number of large pores
Naked Skin (NS)	172	78
Time 0	20	3
Time 15 minutes	15	3
Time 1 hour	11	4
Time 6 hours	10	3
Average reduction vs. NS	88%	95%

Images: Page 1 – dow_63294394941, dow_71864730841; Page 2 – AdobeStock_100962224, AdobeStock_277988206, AdobeStock_332123097; Page 3 – dow_67389193580

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