SPF Boosting

Fine Silica Microspheres

RESIFA™ SOLESPHERE

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RESIFA™ SOLESPHERE™ Product Line

SOLESPHERE	H-33	H-53	NP-100
Form/Appearance	White, fine, free flowing powder		
INCI Name	Silica		
Particle Size	3 µm	5 µm	10 µm
Surface Area	600~800 m^2/g	600~800 m^2/g	100 m^2/g
Pore Volume	2.0 mL/g	2.0 mL/g	0.1 mL/g max

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SOLESPHERE Grades for SPF Boost

- H-33 and H-53 Boosts SPF and improves the feel and spreadability on the skin
- NP-100 – Added SPF boost and improves freeze/thaw stability of W/O emulsions

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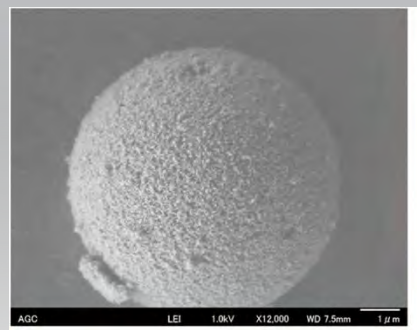
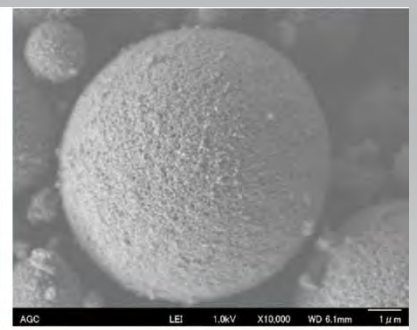
SOLESPHERE H-33 & H-53 Benefits

- SPF boosting with formulations using organic and/or inorganic UV actives
- Improves the spreadability of sunscreens and incorporation into the skin
- Enhances the feel and texture of sunscreens
- Can make W/O feel like O/W





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SOLESPHERE H-33 & H-53 Applications

Silica can be used in a wide variety of sunscreen formulations UV actives.

- Organic and inorganic UV actives
- O/W, W/O, anhydrous
- Creams and lotions
- Lip balms and sticks
- Spray applications
- Daily wear cosmetics

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How SOLESPHERE Works in Sunscreens

Film Forming and Film Thickness

- Microspherical structure allows for better spreadability and distribution
- Creates a consistent, uniform film on skin
- Helps disperse UV active ingredients
- Large particles lead to thicker films
- SOLESPHERE particles are much larger than conventional SPF boosting additives
- Provide physical spacing of sunscreen actives

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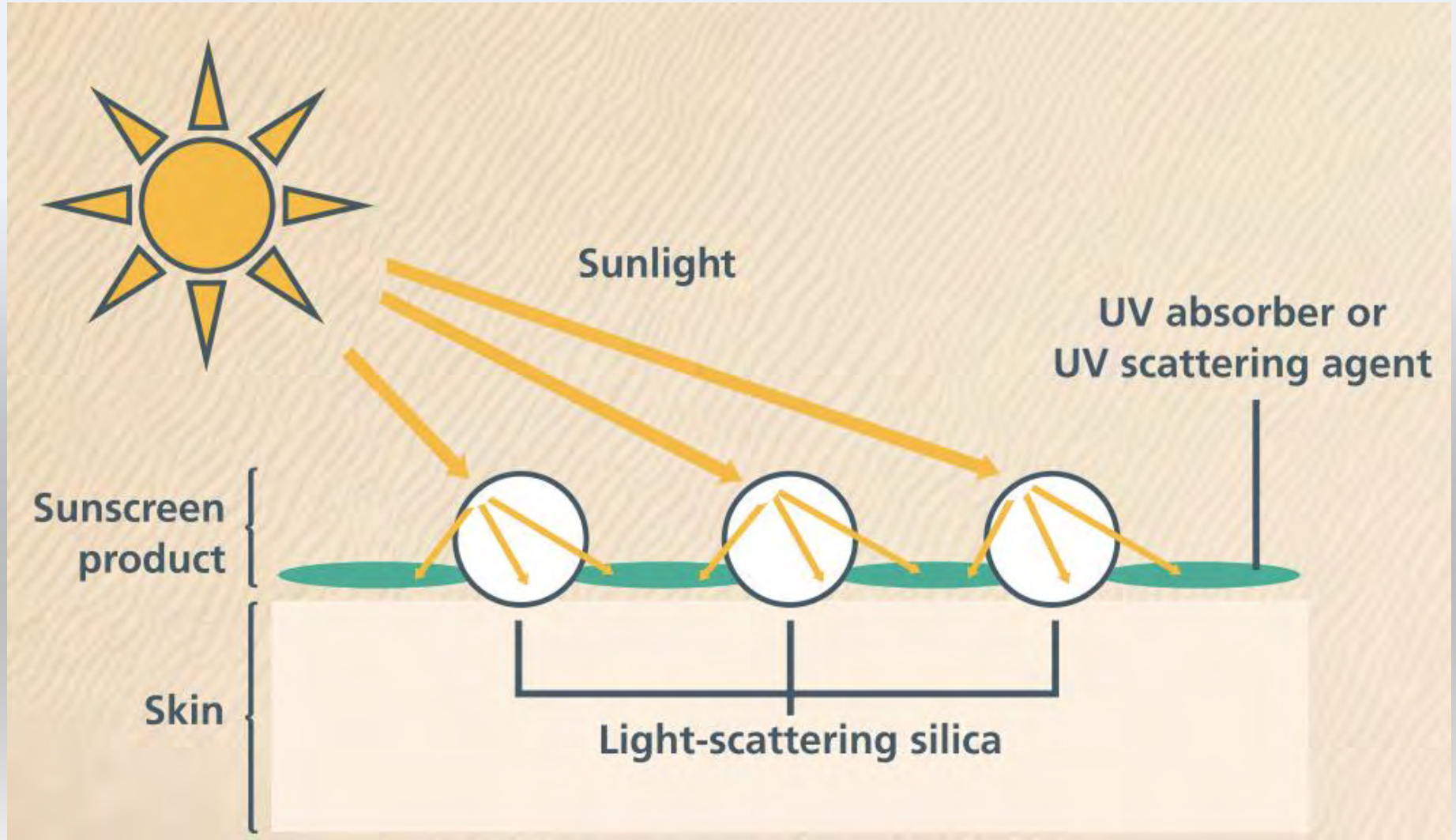
Light Scattering Effect



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Light Scattering Effect

- Unique, uniform structure with high specific surface areas and large pores
- Increases the path of light, making refection or absorption by sunscreens more likely
- More UV light scattered = less light to be absorbed with UV actives
- SOLESPHERE silicas create safer UV filters to achieve desired SPF.
- SOLESPHERE silicas are very stable over a wide temperature range.

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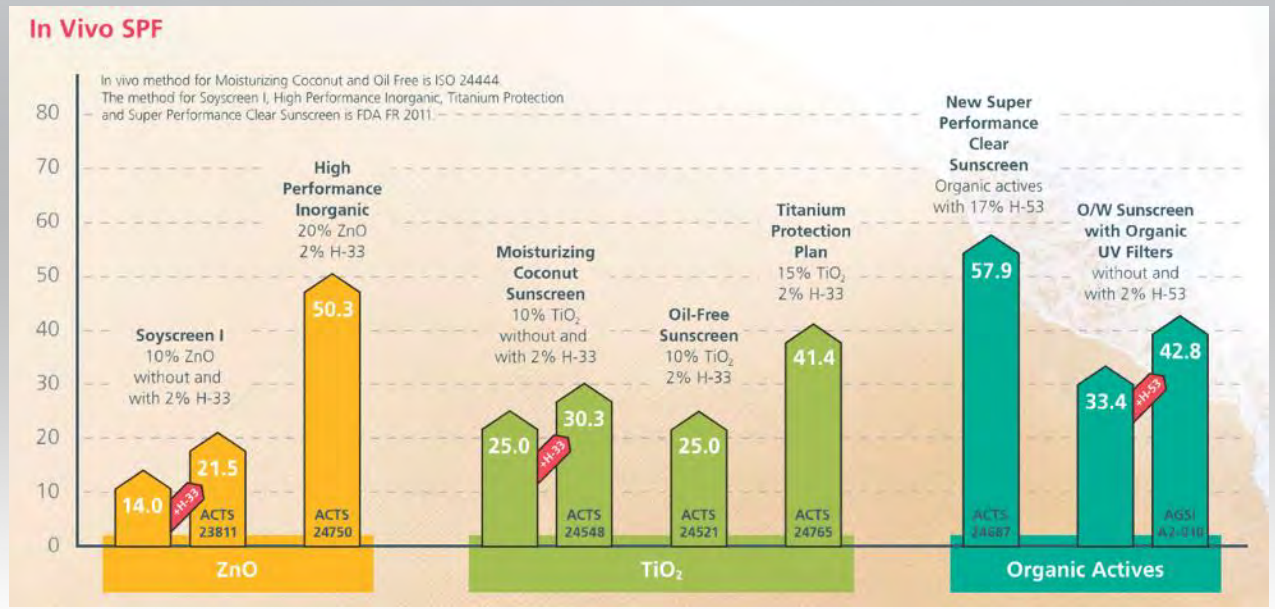
SPF Boosting Performance

- Consumers are moving toward inorganics, namely ZnO.
- ZnO is not especially efficient for providing SPF.
- W/O emulsions maximize SPF efficiency, but the feeling on the skin is not great.
- H-33 makes W/O emulsions feel like O/W while significantly improving SPF efficiency.



Formulations

Titanium Protection Plan (ACTS 24765)

	Trade Name	INCI Name	wt (%)
A	**Water**	Water	43.28
B	**Zemea**	Propanediol	10.00
	Tris Amino Ultra PC	Tromethamine	0.10
C	**FeruliShield Soy**	Feruloyl Soy Glycerides	5.00
		Caprylic / Capric Triglyceride	19.75
	Span 20	Sorbitan Laurate	0.50
	CosmoSurf DDG-20	Bis-Octyldodecyl Dimer Dilinolete / Propanediol Copolymer	2.00
D	**Cithrol PGTL**	Tri (Polyglyceryl-3 / Lauryl) Hydrogenated Trilinoleate	2.00
	MT-150EX	Titanium Dioxide (and) Aluminum Hydroxide (and) Isostearic Acid	15.00
	MT-700Z	Titanium Dioxide (and) Aluminum Hydroxide (and) Stearic Acid	0.37
	SOLESPHERE H-33	Silica	2.00

Moisturizing Coconut Sunscreen (ACTS 24548)

	Trade Name	INCI Name	wt (%)
A	**Water**	Water	44.25
B	**Zemea**	Propanediol	10.0
	RonaCare Magnesium Sulfate	Magnesium Sulfate	0.5
	Spectrastat	Caprylhydroxamic Acid (and) Caprylyl Glycol (and) Glycerin	1.0
C	**Citropol 1A**	Polycitronellol Acetate	25.0
	FeruliShield Coconut	Coconut Oil Ethyl Ferulate Esters	2.0
	Span 20	Sorbitan Laurate	1.0
	CosmoSurf DDG 20	Bis-Octyldodecyl Dimer Dilinoleate/ Propanediol Copolymer	2.0
	Cithrol PGTL	Tri- (Polyglyceryl-3/Lauryl) Hydrogenated Trilinoleate	2.0
D	**MT-150EX**	Titanium Dioxide (and) Aluminum Hydroxide (and) Stearic Acid	10.0
	MT-700Z	Titanium Dioxide (and) Aluminum Hydroxide (and) Stearic Acid	0.25
	SOLESPHERE H-33	Silica	2.0

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Formulations

High-Performance Inorganic ZnO Sunscreen (ACTS 24750)

	Trade Name	INCI Name	wt (%)
A	Water	Water	48.4
B	Zemea	Propanediol	10.0
	Tris Amino Ultra PC	Tromethamine	0.1
C	Feruloyl Soy Glycerides	Feruloyl Soy Glycerides	5.0
	Caprylic/Capric Triglycerides	Caprylic/Capric Triglycerides	15.0
	Span 20	Sorbitan Laurate	0.5
	CosmoSurf DDG-20	Bis-Octyldodecyl Dimer Dilinoleate/ Propanediol Copolymer	2.0
	Cithrol PGTL	Tri- (Polyglyceryl-3/Lauryl) Hydrogenated Trilinoleate	2.0
D	SOLESPHERE H-33	Silica	2.0
	Zinclear XP Powder	Zinc Oxide	15.0

New Super Performance Clear Sunscreen (ACTS 24687)

	Trade Name	INCI Name	wt (%)
A	C'Ester MCT	Caprylic / Capric Triglyceride	43.00
	Eusolex HMS	Homosalte	15.00
	Eusolex OCR	Octocrylene	10.00
	Eusolex OS	Octislate	5.00
	FeruliShield Soy	Feruloyl Soy Glycerides	5.00
	Parsol 1789	Avobenzone	3.00
	SolaStay S1	Ethylhexyl Methoxycrylene	2.00
B	SOLESPHERE H-53	Hydrated Silica	17.00

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Summary

- SOLESPHERE silica not only improves the spreadability and incorporation of sunscreens into the skin, but also provides SPF boosting with formulations using organic and/or inorganic UV actives.
- SOLESPHERE H-33 and H-53 provide significant boost in SPF and dramatically improve the tactile aesthetics.
- Natural material, coral and reef safe, non-microplastic, non-nano material.

For more information, please visit **resifasolesphere.com**

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