

Microsphere Silica Gels for Cosmetic and Personal Care Applications

SOLESPHERE™ is made from silicon dioxide (SiO₂), which is abundant in nature. We use a proprietary process to produce silica gels in a spherical shape having particle sizes from 3-20µm and an oil absorption range from 30-400 mL/100g. SOLESPHERE™ is an amorphous type silica which are safe for the environment and safe to use in cosmetic and personal care applications.

Key Attributes

- Good oil absorption
- Light scattering, soft focus
- Anti-settling
- Anti-caking
- Gentle abrasive for exfoliation applications
- Soft, smooth texture with a silky dry finish in creams and lotions
- Good alternative for plastic/microbeads and other nanomaterials
- Enhances formulation stability

Product Line Up



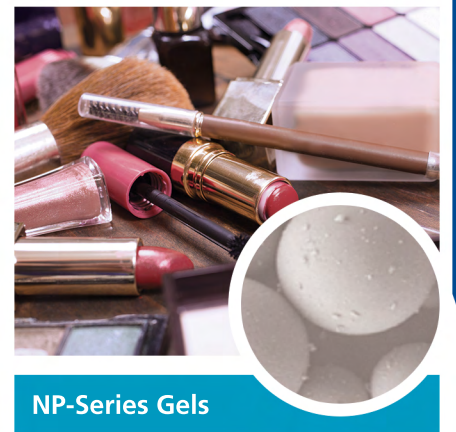
H-Series Gels

- High surface area (700-800 m²/g)
- Porous
- Two types available: Normal and High Absorption
- Particle size range of 3-20µm
- Applications: Insect repellants, deodorants, sunscreens, cosmetics



L-Series Gels

- Lower surface area (300 m²/g)
- Same oil absorption as H-series grades
- Very smooth and easily blended with other materials
- Porosity provides light scattering effects
- Application: Cosmetics



NP-Series Gels

- Good hardness
- High compression strength
- Highly refractive
- Stabilizes formulations
- Heat resistance and tolerance to temperature changes

How to Read **H-121**

First letter

- H: High specific surface area
- L: Low specific surface area
- NP: Non porous type

Middle one or two digits indicate mean particle size, µm

Last digit indicates oil absorption level

- 0: 30-40 mL/100g *
- 1: 150 mL/100g
- 2: 300 mL/100g **
- 3: 400 mL/100g **

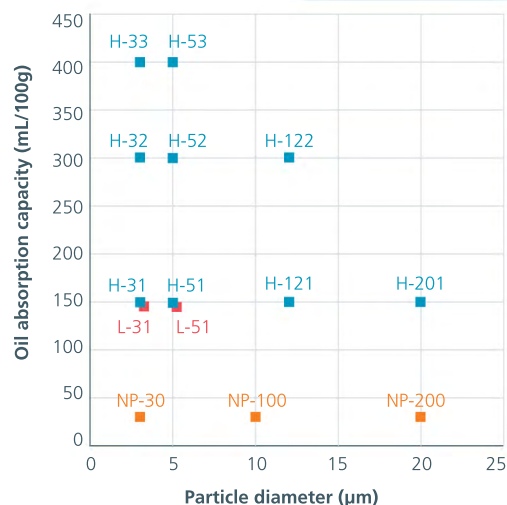
* NP Only

** Sometimes referred to as high pore volume type



Available Grades

Grade	Mean Particle Size (µm)	Specific Surface Area (m ² /g)	Pore Volume (mL/g)	Pore Diameter (nm)	Oil Absorption (mL/100g)	
H-Series Normal Type	H-31	3	800	1	5	150
	H-51	5	800	1	5	150
	H-121	12	800	1	5	150
	H-201	20	800	1	5	150
H-Series High Absorption Type	H-32	3	700	2	10	300
	H-52	5	700	2	10	300
	H-122	12	700	2	10	300
	H-33	3	700	2	11	400
	H-53	5	700	2	11	400
L-Series	L-31	3	300	1	13	150
	L-51	5	300	1	13	150
NP-Series	NP-30	4	40	0.05	-	30
	NP-100	10	50	0.1	-	35
	NP-200	20	100	0.1	-	40



Wide range of particle size and oil absorption

Applications

Target	Aim	Effect	Applicable Grades
Skin care / Foundation	Texture improvement	Slippery	H-51, H-121
		Smoothness	NP-30, NP-100
		Transparency	NP-30, NP-100
		Matte effect (Foundation)	H-121
	Sweat & sebum absorption	Long lasting effect	H-51, H-121
		Anti-oily feeling	H-52, H-53
Coverage of wrinkle	Soft focus	H-51, H-121, H-33, H-52	
Defined features	Stereoscopic effect	H-51, H-121	
Lip stick	Sweat & sebum absorption	Long lasting effect	H-33, H-52, H-53
	Rheology control	Solidifying agent	H-33, H-52, H-53
Mascara	Volume up	Bulking agent	H-121, NP-200
Sunscreens	SPF boost & sweat absorption	SPF Boost	H-52, H-53
		Long lasting effect	H-52, H-53
Body Washes	Texture improvement	Smoothness	H-121, NP-200
		Long lasting effect	H-121, NP-30, NP-100, NP-200
Deodorants	Sweat absorption	Long lasting effect	H-33, H-31, NP-30
		Solidifying agent	H-33, H-31, NP-30
Cream Cleansers	Texture improvement	Slippery	H-51, H-121, NP-30, NP-100, NP-200
		Smoothness	H-51, H-121, NP-30, NP-100, NP-200
Body Scrubs	Texture improvement	Exfoliation	NP-30, NP-100, NP-200, D-200L



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