



Technical Data Sheet

SunSpheres™ Powder

INCI: Styrene/Acrylates Copolymer

Features & Benefits

- Allows reduced amount of UV filters in formulation
- Excellent for aesthetically pleasing formulations
- Boosts protection across the UVA/UVB spectrum
- Potential reduction in irritation caused by actives
- Useful for wide variety of cosmetic products using either inorganic or organic UV filters
- Excellent for water-resistant formulations
- Non-irritating, non-toxic, non-photosensitizing

Applications

SunSpheres™ SPF Boosters can be used in a wide range of sun care and daily wear SPF products containing UV active ingredients:

- Organic and inorganic UVA and UVB actives
- Oil-in-water, water-in-oil and water-in-silicone systems
- Cold- and hot-processable systems
- Low viscosity spray systems
- Cream and lotion formulations
- Stick formulations, lip balms
- Makeup (foundation, BB creams, etc.)

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Typical Use Levels	%	1–5 polymer solids (1–5.5 as is)
Appearance		White powder
Loose Bulk Density	g/cm ³	0.220–0.320
Water Content	%	0.00–3.00
Shelf Life	days	900

Description

SunSpheres™ Powder is a SPF booster polymer built on a unique hollow sphere technology that enables greater SPF efficiency in sun care and daily wear SPF products. The hollow spheres raise the UV protection over the whole UVA/UVB spectrum, working equally well with organic and inorganic actives.

How to Use

SunSpheres™ Powder, as supplied, is in the form of agglomerates, which must be broken down in the final formulation to liberate the primary SunSpheres™ SPF Booster particles. To break down the agglomerates, a high shear process, such as homogenization is recommended.

SunSpheres™ Powder is best incorporated either in the aqueous phase or the oil phase prior to forming the emulsion. Formulations with SunSpheres™ Powder should include homogenization during processing and the addition of heat. Heating to 50°C facilitates processing.

SunSpheres™ Powder is easy to formulate with, and widely compatible, with both organic and inorganic UV actives, including in water resistant formulas, and commonly used ingredients in a wide range of sun care products (O/W, W/O, W/Si, low viscosity pumps, creams and lotions, stick formulations).

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life and Storage

No special conditions are required for the storage of SunSpheres™ Powder, but the material should be kept in the absence of humidity.

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, dow.com or consult your local Dow representative.

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