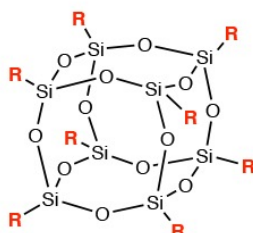


PEG POSS®

INCI NAME: Methoxy PEG-10 Polysilsesquioxane

FEATURES

Clear, colorless liquid. Water and alcohol soluble.



APPLICATIONS

Wetting, dispersion, cleaning and carrier for ingredients in lotions, gels and coatings.

TYPICAL PROPERTIES

Appearance	clear, colorless liquid
Viscosity (@25°C)	0.270 - 0.290 Pa s
Density	1.09
Refractive Index	1.45
Formula Weight	4525.83
Resin Solubility	polyethers, acrylics, polyesters

REGULATORY STATUS

INCI, TSCA, CAS 1838163-04-4

REACH polymer

Not a primary dermal irritant

HANDLING PRECAUTIONS

Product safety information required for safe use is not included in this document. Before handling, read product and material safety data sheets and container labels for safe use, physical health and hazard information. For material safety data information, contact Hybrid.



BENEFITS

Hydrating, baby soft feel on skin and hair. Compatibilizer, rheological diluent. UVB sorption. Noncytotoxic and nonirritating.

DESCRIPTION

PG1190 is a hybrid molecule that is fully water soluble. It provides exceptional hydration and lubricity for silky smooth feel. It can also serve as a compatibilizer and dispersion agent for key ingredients, special effect and colorants.

COMPATIBILITY

Water	Soluble
Emulsified	Yes
Alcohols	
Ethanol (95%)	Soluble
Ethanol (70%)	Soluble
iPropanol (99%)	Soluble
iPropanol (70%)	Soluble
Solvents & Propellants	
Hexanes (aliphatics)	Not Soluble
PGMEA	Soluble
Cosmetic Materials	
Beeswax	Stable
Mineral Oil	Not Soluble
Petrolatum	Stable
1,2 Propane diol	Soluble
Glycerin	Soluble
DC 556 [PhSi(OSiMe ₃) ₃]	Soluble
Fluoroalkyls	Not Soluble
Shea Butter	Unstable
Cocoa Butter	Unstable
Hydroxy Methylcellulose	Soluble
Lanolin	Soluble
Paraffin Wax	Stable
Caprylyl Glycol	Soluble
Cetearyl Alcohol (C ₁₈ OH)	Soluble
Veggie Oil	Soluble



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Peg POSS® PG1190 is ready-for-use and is soluble in water and most organic solvents. It is a well defined polymeric additive that provides high surface area and volume in cosmetic formulations. It is not chemically reactive.

What it does.

Peg POSS® helps to reduce viscosity in highly-filled polymer systems, because it associates with filler surfaces and increases their volume. This attribute can reduce filler settling. It can also be utilized to achieve more uniform and thereby effective use of fillers at lower loadings. In many cases users like to view Peg POSS® as an "octopus-like" carrier of ingredient between cage arms.

For some applications the inherent UVC adsorption of the silica-like cage core may be advantageous. It is also amphoteric meaning it works in polar oils and aqueous systems as a compatibilizer.

How to use it.

Peg POSS® PG1190 can be mixed directly into a formulation color base (filler+pigment+resin). This is the recommended method of use in combination with high-speed mixing.

Surface pretreatment of fillers and pigments is not necessary. However should this be a desirable manufacturing step, the use of a high-speed mixer, or agitator and spraying Peg POSS® onto the surface can be adequate. Since Peg POSS® does not covalently bind to the surface a more thorough distribution will usually be achieved during the final formulation build steps.

High surface area powder typically require 0.25 wt% (2500 ppm) of Peg POSS® relative to a wt% filler. Loading levels above 1 wt% of Peg POSS® can be desirable when dispersion+lubricity+viscosity effects are required.

Peg POSS® PG1190 is effective on metal oxides of Ti, Si, Al, B. It is also effective for carbon(s) for which it provides deep-black-wetted color, and lake pigments. Peg POSS® is also capable of dissolving salts and polymers like cellulose acetate butyrate.

Peg POSS® works by wetting and therefore it is suggested to become familiar with its wetting and carrying characteristics by applying it directly to powders and rendering a paste that appears fully wetted. Then apply additional ingredient to the paste and assess its unique compatibilization capability.

Features Advantages & Benefits

Ready-for-use and non-reactive

Ppm loading level use due to its high surface area and volume.

Widely applicable as a compatibilizer

Soluble in water and most organic solvents.

Effective for a wide range of pigments, fillers, and key ingredients.

Proper Care Requirements

Please read its Safety Data Sheet (SDS) and toxicological information. Follow recommended storage and use. Suggested Shelf-life for opened or sealed containers is 3 years.

Disclaimer

This information and all further technical advice are based on our present knowledge and experience. It implies no liability or other legal responsibility on our part, including with regard to existing third-party intellectual property rights. No legal warranty or guarantee is intended or implied. We reserve the right to make any changes according to technological progress or further developments.