

# Gemini<sup>®</sup> PFPE Functional Material HCPA-S50

## Introduction

HCPA-S50 generally works as the main component of a UV formulation with nitrogen protection cure, it's a multi-functional PFPE methacrylate, 100% solid, solvent free, high fluorine content. Soluble only in fluoro solvents. Poor compatibility with hydrogenated acrylic monomers and hydrogenated reactive diluents, but can blend with conventional photoinitiators.

HCPA-S50 performance material homopolymer is an elastomer with outstanding chemical resistance, low surface energy, water/oil repellent, ultra low refractive index, high thermo optic coefficient, anti sticking, low elastic modulus.

## Applications

HCPA-S50 has fantastic applications in Optics, Photonics like AR/AS coating, OCA Optical adhesive, Nanoimprint lithography, Polymeric waveguides, Cladding of military optical fibers, Low propagation loss fabrication in microring resonators, Aquatic molecules biosensing, Solvents resistant layer of microfluidic devices, Drag reduction coating for marine vessels and AUV, Biomaterials coating for tissue engineering and cell culture, Non-adhesive spatial construct coating for micropatterned cell chips, Nanotexture shape coating on electroadhesive interface of haptic devices, Surface relief materials, 3D display, Protective optical coating for anti counterfeiting printing etc.

## Typical Properties

	Units	HCPA-S50
Appearance		Colorless Transparent liquid
Viscosity at 25°C	cP	~670
Content	wt%	≥98%
RI		1.31
AMW(Mn)	amu	~4100

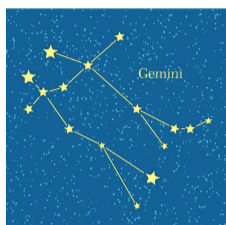
PS: RI in visible spectrum at 25°C

The average molecular weight of the product is obtained by the calculation through the degree of polymerization by the NMR spectrum.

## Attentions

- During processing, avoid direct contact with the skin, using gloves and safety glass in the test. If skin contacts with products, immediately wipe with a dry cloth and then wash skin with soap and water, If eyes contact with products, immediately flush eyes with plenty of water for at least 5 minutes, and call a physician.
- Keep the container sealed and store in cool, dark, well ventilated locations, shelf life 1 year.

**Packaging/Transport** 1Kg,5Kg,10Kg plastic jug. Not classified as dangerous in the meaning of transport regulations.



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