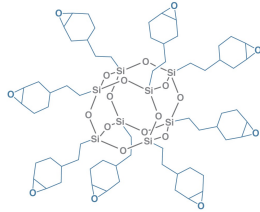


Product Information - EP0408 POSS Affords Finer Features in Electronics Photodefinable Epoxycyclohexyl POSS

EP0408 POSS provides a resilient, strong inorganic/organic hybrid dielectric, which has favorable mechanical and chemical stability for use as a permanent dielectric in microfabrication. POSS films exhibit adequate optical properties and photodefinability. Its thermal and chemical stability allow for a tough and durable overcoat.

DESCRIPTION

EP0408 is a hybrid molecule with an inorganic silsesquioxane core and organic epoxycyclohexyl groups attached at the corners of the cage.



APPLICATIONS

EP0408 can be cured with aromatic, aliphatic amines and photoinitiators. EP0408 provides increased use temperature, excellent water and solvent resistance. In a variety of solvents and oxidants, films demonstrated chemical stability and were thermally stable up to 350°C.

EP0408 PROPERTIES

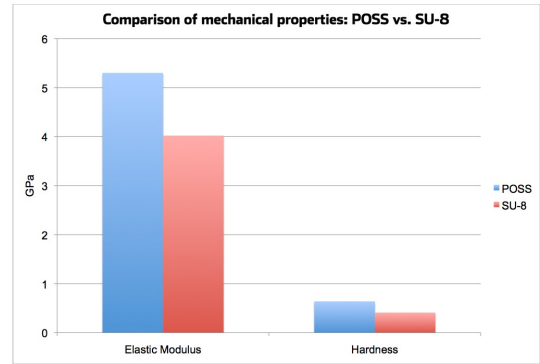
Appearance	Clear, pale yellow/orange, semi-solid
Viscosity (@60°C)	500 Poise
Density	1.24
Refractive Index	1.52
Formula Weight	1418.2
EEW	177
Resin Solubility	aromatic and aliphatic epoxy resins

REGULATORY STATUS

INCI

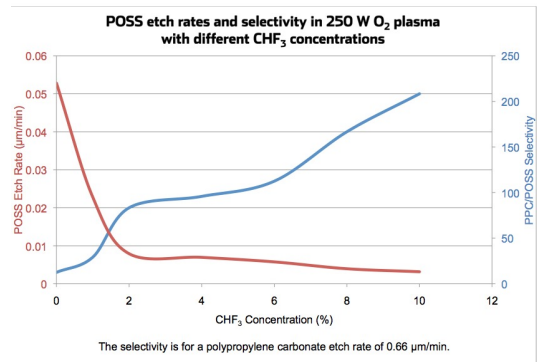
HANDLING PRECAUTIONS

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 health and hazard information. For safety data information, contact Hybrid.



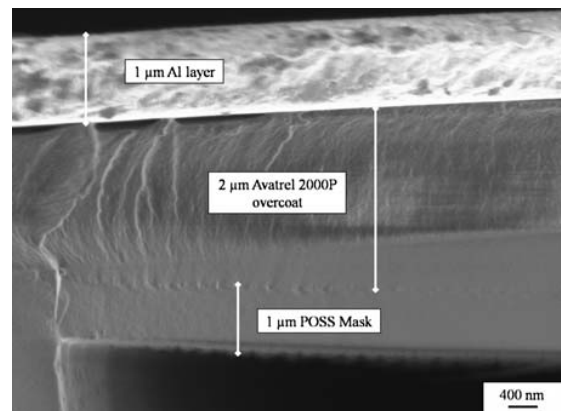
FEATURE 1*:

EP0408 Dielectric has a high elastic modulus of 5.3 GPa and hardness of 0.64 GPa, which is comparable to that of SU-8, a photodefinable epoxy polymer used in MEMS structure (modulus 4.02 GPa and hardness 0.41 GPa).



FEATURE 2*:

EP0408 Dielectric has high etch selectivity compared with organic films for pattern transfer.



FEATURE 3*:

EP0408 Dielectric provides a protective chemical barrier and mechanical overcoat for microchannels of MEMS packaging.



www.hybridplastics.com

* data taken from *Journal of Electronic Materials* 39 (2) (2013) p. 149-153.

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