

## Dow SiLK™ I300 280 Semiconductor Dielectric Resin

Category : Polymer

### Material Notes:

SiLK™ I300 280 is designed for easy integration and extendibility, and its formulations offer a robust feature set. High thermal stability and fracture toughness means SiLK™ I300 280 is compatible with standard IC processing tools in today's fabrications. SiLK™ I300 280 is fluorine-free, thus is compatible with Ti and Ta barrier materials. Information provided by Dow

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Dow-SiLK-I300-280-Semiconductor-Dielectric-Resin.php](http://www.lookpolymers.com/polymer_Dow-SiLK-I300-280-Semiconductor-Dielectric-Resin.php)

Physical Properties	Metric	English	Comments
Water Absorption	0.24 %	0.24 %	80% R.H.
Thickness	0.280 microns	0.0110 mil	3000 rpm
	0.2425 - 0.3425 microns	0.009547 - 0.01348 mil	2000-4000 rpm

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	89.0 MPa	12900 psi	
Tensile Strength, Yield	60.0 MPa	8700 psi	
Tensile Modulus	2.45 GPa	355 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	62.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 50.0 - 150 $^\circ\text{C}$	34.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 122 - 302 $^\circ\text{F}$	
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft <sup>2</sup> - $^\circ\text{F}$	
	0.230 W/m-K @Temperature 125 $^\circ\text{C}$	1.60 BTU-in/hr-ft <sup>2</sup> - $^\circ\text{F}$ @Temperature 257 $^\circ\text{F}$	
Glass Transition Temp, Tg	$\geq 490$ $^\circ\text{C}$	$\geq 914$ $^\circ\text{F}$	
Decomposition Temperature	450 $^\circ\text{C}$	842 $^\circ\text{F}$	1% weight loss per hour

Optical Properties	Metric	English	Comments
Refractive Index	1.63	1.63	

Electrical Properties	Metric	English	Comments
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Electrical Properties	<sup>2.6</sup> Metric	<sup>2.6</sup> English	Comments
	@Frequency 100000 Hz	@Frequency 100000 Hz	
Dielectric Strength	>= 400 kV/mm	>= 10200 kV/in	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China