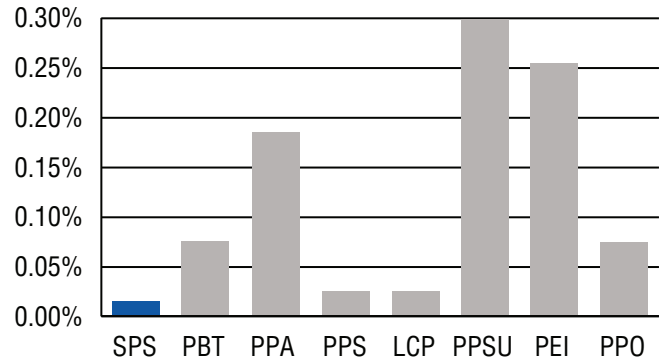


Xarec<sup>®</sup> is the trade name for Syndiotactic Polystyrene (SPS) and is a Registered Trademark of Idemitsu Chemical. It is a non-polar polymer with unique properties, such as outstanding chemical resistance and electrical features. Xarec<sup>®</sup> SPS is ideal for applications that require dimensional stability, sterilization, high resistivity, low dielectric constants, temperature resistance, and resilience in moisture rich environments.

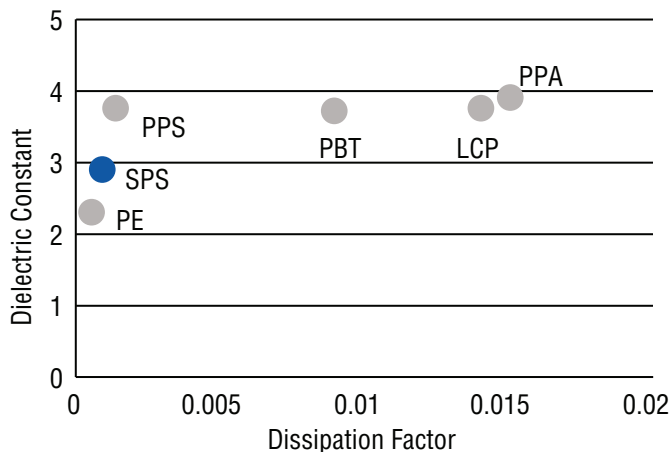
### Dimensional Stability

	Crystalline Density (g/cm <sup>3</sup> )	Amorphous Density (g/cm <sup>3</sup> )	Difference (%)
Xarec <sup>®</sup> SPS	1.05	1.05	0.00%
PPS	1.43	1.32	7.69%
PBT	1.41	1.28	9.22%
PA66	1.23	1.08	12.20%
PA46	1.28	1.08	15.63%
PET	1.5	1.3	13.33%

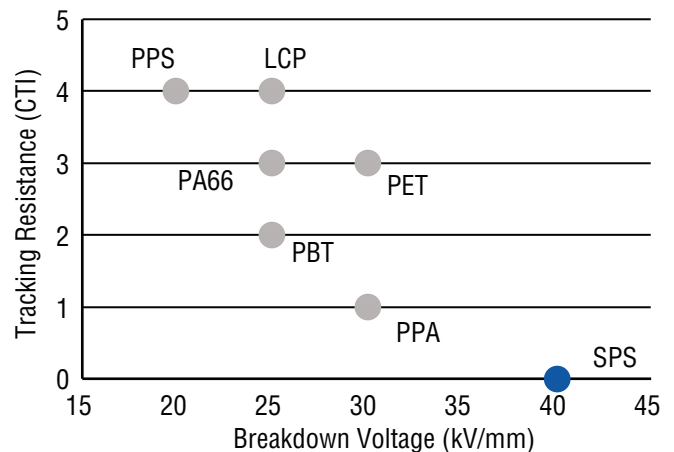
### 24 Hour Water Absorption



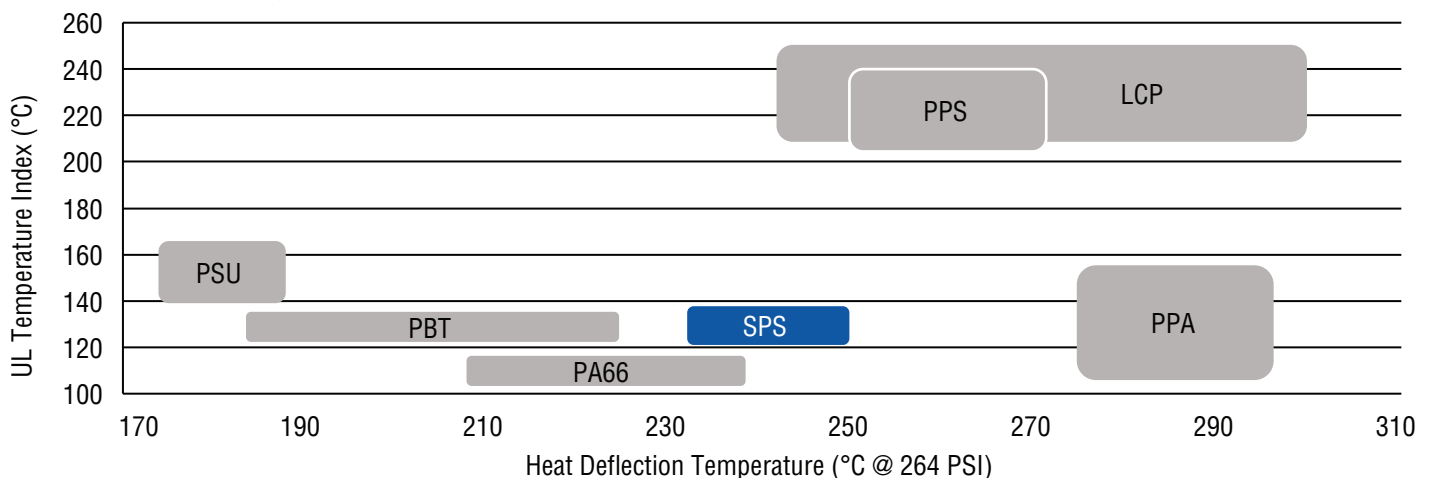
### Electrical Insulation & Power Loss



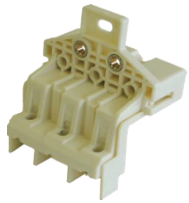
### Electrical Durability



### Thermal Stability



## Applications



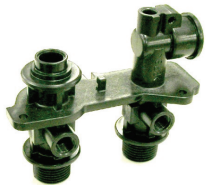
### High Voltage Connector

- Superior Chemical Resistance
- Excellent Tracking Defense
- Heat & Humidity Resilience



### Incandescent / LED Light Socket

- Low Outgassing
- 1000 Hour Exp to 210°C Cycle
- Excellent Electrical Properties



### Fluid Engineering Components

- Superior Hydrolytic Stability
- Excellent Resistance to -Cl Water
- NSF61 Drinking Water Approved



### Arthroscopy Adapter

- Steam Sterilization (500+ Cycles)
- Excellent EtO / Gamma Sterilization
- ISO10993 / USPVI

## Chemical Resistance

	PPS	SPS	PA66	PPA	PBT
Acids	Good	Good	Poor	Poor	Fair
Bases	Good	Good	Good	Good	Good
Glycols (Antifreeze)	Good	Good	Fair	Good	Good
Oils (Under Hood Fluids)	Good	Good	Good	Good	Good
Chlorinated Hydrocarbons	Fair	Poor	Poor	Poor	Poor
Aromatic Hydrocarbons	Good	Fair	Fair	Fair	Fair
Aliphatic Hydrocarbons	Good	Good	Good	Good	Good
Gasoline	Good	Fair	Good	Good	Good
Alcohols	Good	Good	Poor	Poor	Good
Salt Solutions	Good	Good	Good	Good	Good
Water	Good	Good	Poor	Poor	Fair

Legend

Good	
Fair	
Poor	

## Important Design Considerations

Grade	Tradename	Xarec® SPS Grade	Design Considerations
PBT	Valox	NWA7020, NWA7030	Review secondary operations.
PET	Rynite	EA522, EA533	Establish required UL rating, EA522 can be supplied as 5VA or V0. Determine ductility requirements of flexible features (snap fits).
PPA	Amodel, Zytel HTN	WA212	Decide upon elevated temperature requirements: creep & thermal stability.
LCP	Vectra	EA533, WA212	Injection molding gates and draft angles for LCP differ significantly from recommendations for Xarec® SPS. Determine UL rating required.
PSU	Udel	WA214	Formulate requirements for wear resistance & transparency.
PPS	Ryton	WA214, EA543	Determine elevated temperature requirements: creep & thermal stability.