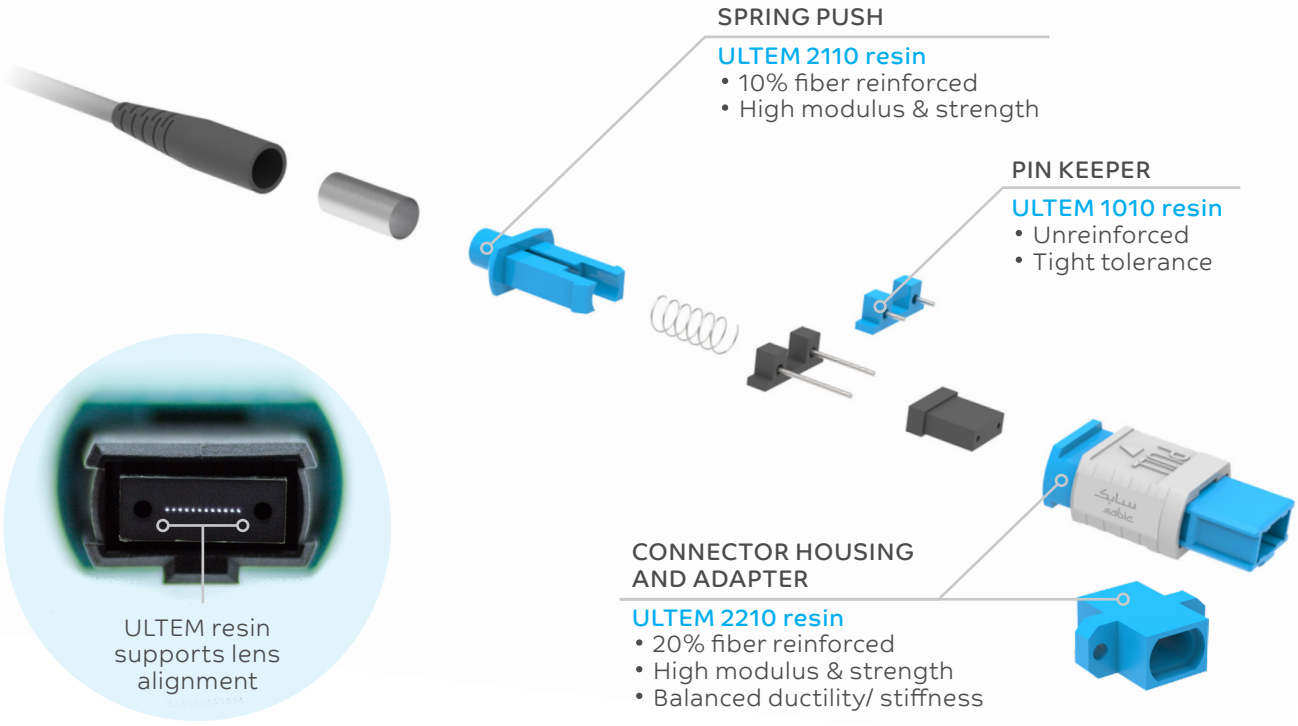
CHEMISTRY THAT MATTERS™

ULTEM™ RESINS USED IN MULTI-FIBER PUSH ON (MPO) CONNECTORS

A great advantage of MPO is the bundling of 8-32 connections in one plug. This improves handling, space and costs versus the use of individual fiber connections. However, the alignment of the rows of fibers is a key challenge, introducing potential insertion loss and reflection issues.

SABIC's ULTEM resins are often used for multi-fiber push on (MPO) connectors in high-speed data centers and optical fiber networks. The high-performance material can address the fiber alignment issue thanks to its excellent dimensional stability under a wide range of temperatures and moisture levels. In addition, the high strength, high modulus and practical ductility of ULTEM resins can help enable advanced design features like thin-wall components with precise connections.



ULTEM RESINS CAN PROVIDE

- Long lasting reliability
- Stable optic signals with temperature
- Stable optic signals with humidity
- Passing 200 insertion tests
- Thin-wall flame resistance
- Proven economical mass production
- Colored solutions

THROUGH

- Modulus & strength retention after 80°C/85H @1000hrs
- Dimensional stability over thermal range of -20°C to ~150°C
- Dimensional robustness over broad environmental humidity
- Balanced ductility and stiffness performance
- Inherent FR characteristics, halogen- and PFAS-free
- Easy processing with tight tolerance through molding
- Compliance to IEC 61249-2-21 , IPC 4101E and JEDEC JS709B

MATERIAL PROPERTIES

ULTEM resin shows excellent dimensional stability over broad temperature ranges. Contact our sales team to learn how ULTEM resin may outperform other materials such as PES.

ULTEM RESINS TYPICAL PROPERTY VALUES	UNITS	ULTEM 1010 RESINUNFILLED	ULTEM 2110 RESIN 10% GLASS FIBER	ULTEM 2210 RESIN 20% GLASS FIBER
MECHANICAL				
Tensile Modulus, 5 mm/min (ASTM D638)	MPa	3350	4610	6890
IMPACT				
Izod Impact, notched, 23°C (ASTM D256)	J/m	32	48	64
THERMAL				
HDT/Be, 0.45MPa (ISO75/Be)	°C	209	207	210
Vicat Softening Temp, Rate B50 (ISO 306)	°C	211	212	212
CTE, 20°C to 150°C, xflow (ISO 11359-2)	ppm/ °C	52	30	21
CTE, 23°C to 150°C, flow (ISO 11359-2)	ppm/ °C	52	51	49
PHYSICAL				
Density (ISO 1183)	g/cm³	1.27	1.34	1.42

SABIC ISCC+ CERTIFIED RENEWABLE ULTEM RESIN SOLUTIONS

A new portfolio of bio-based ULTEM resins that delivers a lower carbon footprint while offering the same high performance and processability as incumbent ULTEM materials is now available.

ISCC International Sustainability & Carbon Certification

Please consult our website to find more information:
https://www.sabic.com/en/products/specialties/ultem-resins

CONTACT YOUR SABIC REPRESENTATIVE FOR MORE DETAILS

AMERICAS
SABIC Americas
E productinquiries@sabic.com
T +1-800-845-0600

ASIA PACIFIC
SABIC Shanghai
E asiaproductinquiries@sabic.com
T +86-21-2037-8118

EUROPE
SABIC Bergen op Zoom
E webinquiries@sabic.com
T +31 164 292 911

SCAN TO CONNECT WITH US ON LINKEDIN