

Extreme Conditions Applications

Thermoplastic elastomers (TPE's) are best known for the wide range of soft textures and cushioning that they provide, either alone or when bonded to harder substrates. In many industries, including automotive, medical, industrial, and electrical, there is growing demand for elastomeric materials that can perform under very high and low temperatures, sterilization procedures and environmental conditions, as well as withstand exposure to caustic substances; resist hydrolysis,



and provide flame-retardant or non-flame characteristics. In response, leading experts in material formulation and compounding, are developing new TPE's that provide the technical performance required under these extreme conditions.

Premium Performance

Polymax^{TPE}, a leader in material formulation and compounding, continues to expand the range of technical performance parameters of premium quality thermoplastic elastomers. The company has developed a portfolio of over 500 standard and specialty TPE grades that can be used alone or bonded to a wide range of substrates including PE, PP, ABS, PC/ABS, Co-Polyester, Nylon and Propionate. With a reputation for creating better solutions faster, Polymax^{TPE} has become a go-to source for engineers and designers, across a wide range of market segments, seeking a better solution for high performance under extreme conditions.



Polymax^{TPE} has designed materials that can be sterilized by EtO, gamma radiation, and super-heated steam autoclaving at temperatures up to 134°C, while maintaining self-sealing properties.

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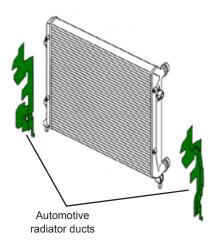
Quality Assurance

Polymax^{TPE} materials are produced with state-of-the-art machinery from leading American and German manufacturers to ensure consistent, high-quality performance. The company's facilities include the latest laboratory equipment for material development and testing. Polymax^{TPE} has instituted advanced quality assurance programs and operational standards to meet the exacting needs and expectations of leading global manufacturers and brands.

Polymax^{TPE} Creates Thermoplastic Elastomers that Endure

- Environmental Conditions
- Temperature Extremes
- UV Exposure
- Medical Sterilization Procedures
- Abrasion

- Caustic Fluids
- High Impact
- Shock and Vibration
- Flammability Conditions
- Hydrolysis



Polymax^{TPE} developed a thermoplastic elastomer material to withstand the demands of an automotive radiator duct. This complex component required high material flow properties and heat aging resistance at 150° C for more than 700 hours and low temperature resistance of -30° C for 24 hours.





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