

THERMOCOMP™ COMPOUNDS FOR DIELECTRIC SOLUTIONS

LNP™ THERMOCOMP compounds portfolio contains thermoplastic injection molding materials that offer low Dissipation Factor (D_f) for improved signal gain and longer reading distance paired with tailor made Dielectric Constants (D_k) to fine tune or detour a signal direction supporting innovative antenna designs. Additionally, THERMOCOMP compounds allow further antenna miniaturization and the design of phase shifters with higher productivity through combined high D_k and low D_f material properties.



TYPICAL INDUSTRY REQUIREMENTS:

- Materials for individual antenna design to fine tune or detour signal direction
- Improved signal gain and longer reading distance through less signal attenuation
- Miniaturized antenna solutions with sufficient signal strength for 5G technology
- Improved mechanical performance versus Epoxy or Ceramics in more complex designs for less maintenance through longer lifetime

TYPICAL MATERIAL CHARACTERISTICS:

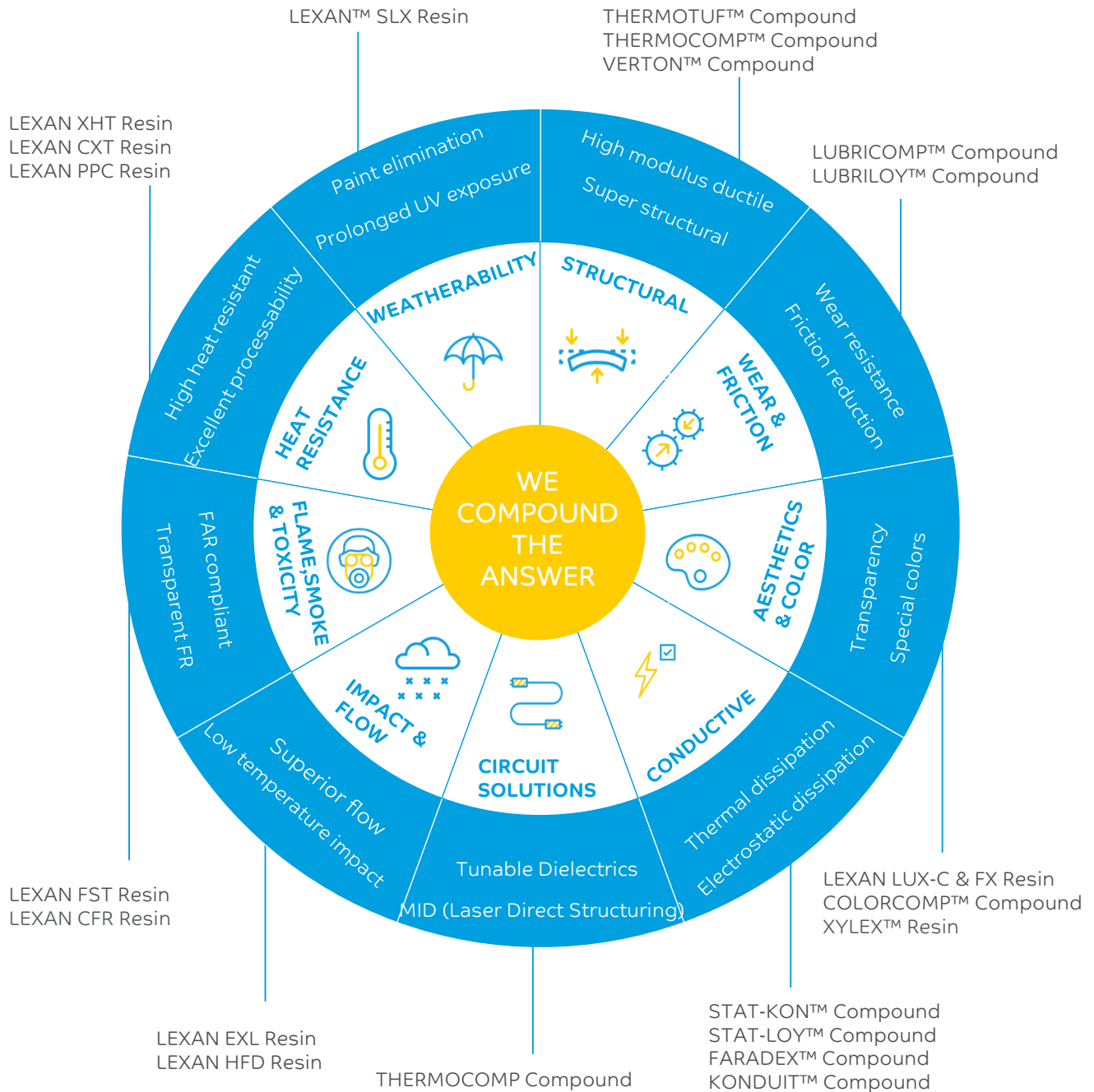
- Tailored Dielectric Constant D_k by customized compound formulations
- Very low Dissipation Factor D_f for lower signal absorption, less signal scattering
- Combined high D_k and low D_f with very high signal transmission density
- Sufficient flowability for thin wall design, improved ductility, dimensional and dielectric stability versus current solution

TYPICAL PROPERTIES OF THERMOCOMP COMPOUNDS FOR DIELECTRIC SOLUTIONS:

HDPE Resin	FX10009*	D_k 13.1, D_f 0.008, stable high D_k , low D_f values
	ZKC04	D_k 3.04, D_f 0.0009, stable high D_k low D_f values
	ZKC06	D_k 3.56, D_f 0.0009, stable high D_k low D_f values
	ZKC08	D_k 3.91, D_f 0.0009, stable high D_k low D_f values
	PPO Resin	ZX08309
ZX08005*		D_k 6.16, D_f 0.001, stable high D_k low D_f values
ZX06323		D_k 6.3, D_f 0.004, stable high D_k low D_f values
PC Resin	DX09309	D_k 8, D_f 0.01, stable high D_k low D_f values
PPA Resin	UX08319**	D_k 6.2, D_f 0.015, stable high D_k low D_f values, LDS capable, SMT capable

LNPT™ COMPOUNDS & LEXAN™ COPOLYMER RESINS

Over 70 years of innovation in thermoplastic compounding enables SABIC's specialty compounds to offer extensive materials with a broad portfolio.



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