

ARKEMA

KEPSTAN[®]

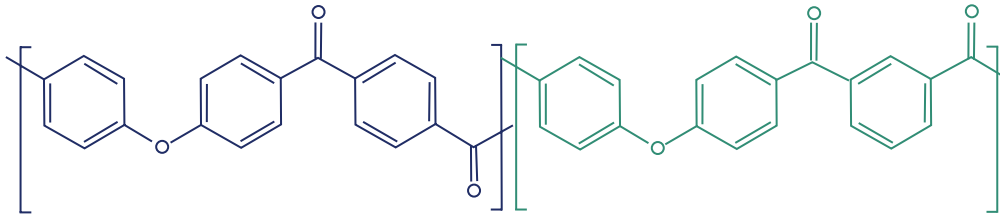
KEPSTAN[®] PEKK

PEKK – Polyether Ketone Ketone



KEPSTAN® PEKK RANGE

Kepstan® PEKK is a member of the Poly Aryl Ether Ketone (PAEK) family, which has the uncommon make-up of being a copolymer that contains terephthalic and isophthalic moieties.



The T/I ratio is set at the synthesis level and controls thermal properties and crystallization kinetics of the resulting polymer. Kepstan® PEKK comes in three “series,” each with a different T/I ratio as designed by Arkema to better fit application requirements.

KEPSTAN® PEKK SERIES

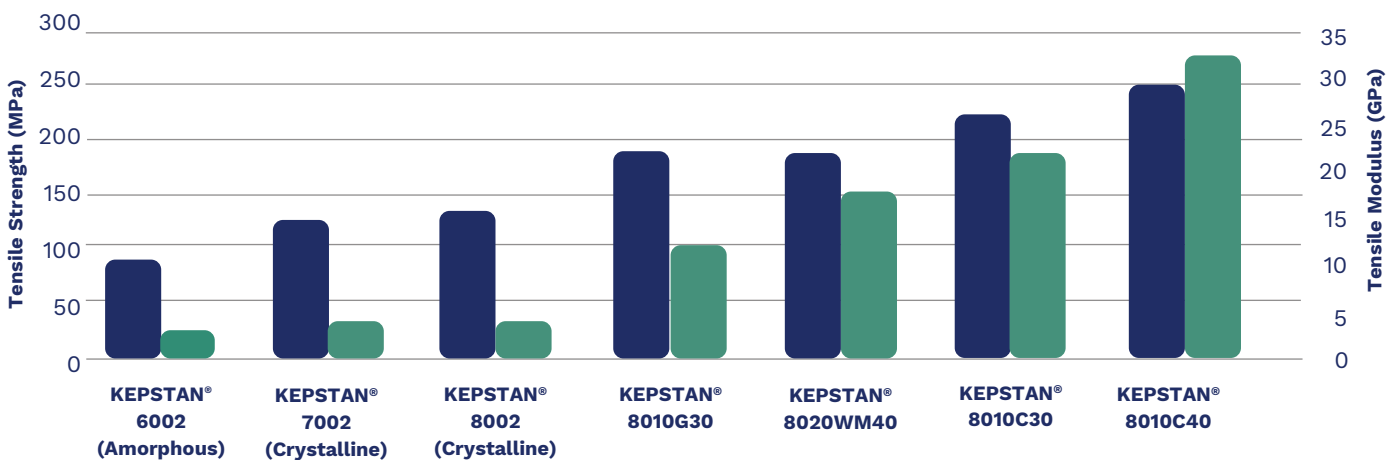
SERIES	T/I RATIO	TM	TG	CRYSTALLIZATION SPEED
8000	80/20	358°C	165°C	Fast/Semi-Crystalline
7000	70/30	332°C	162°C	Medium/Semi-Crystalline
6000	60/40	305°C	160°C	Slow/Pseudo-amorphous

For each series, up to four levels of viscosity are offered for better adaptation to the processing technique. Kepstan® PEKK is sold as powder and pellets in the virgin state or compounded with glass fiber or carbon fiber.



TENSILE STRENGTH AND MODULUS

● Tensile Strength (MPa) ● Tensile Modulus (GPa)



KEPSTAN® PEKK FEATURES

Kepstan® PEKK provides a unique combination of properties over a very wide range of temperatures. This polymer family has exceptional advantages for processing and expands the application possibilities offered by the PAEK family.

→ High temperature resistance

- Highest Tg of PAEK
- Tm range 305 - 358°C

→ High tensile and compression strength/high stiffness

→ High chemical resistance in harsh conditions

→ Excellent fire properties

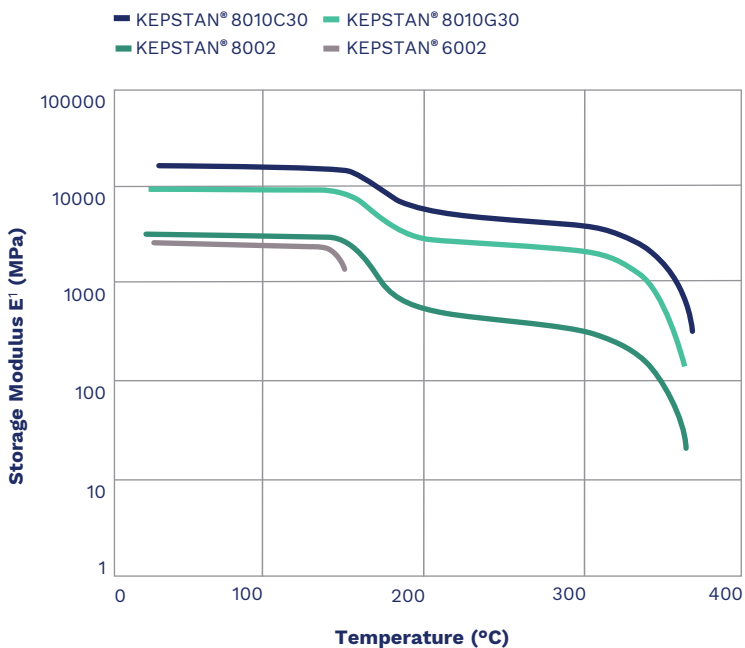
- Low smoke and toxicity
- Inherently flame retardant

→ High purity, very low extractibles

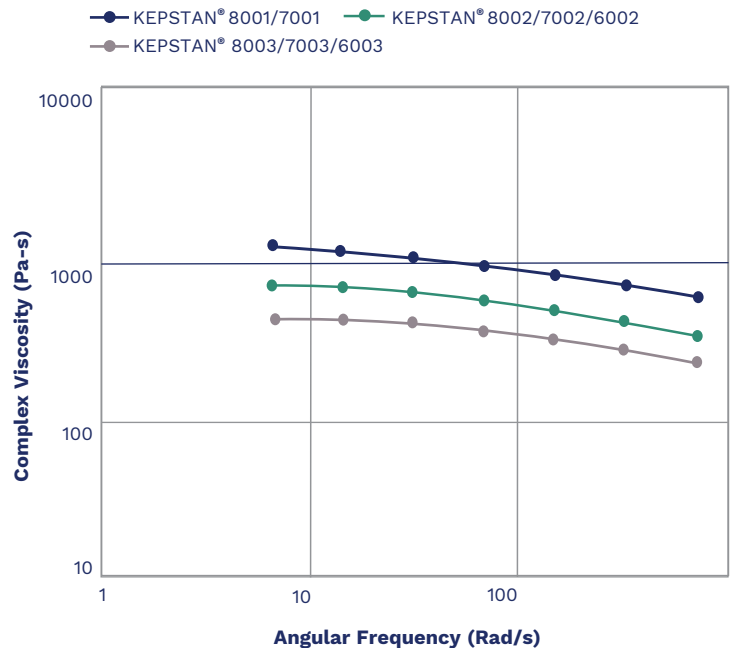
→ Processable by all conventional high temperature extrusion and molding techniques

→ Especially suitable for additive manufacturing, powder coatings, thermoforming, and composites

FLEXURAL DMTA

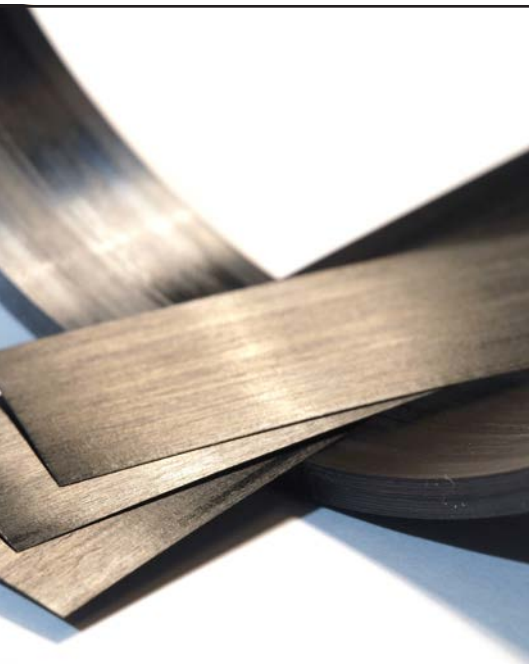
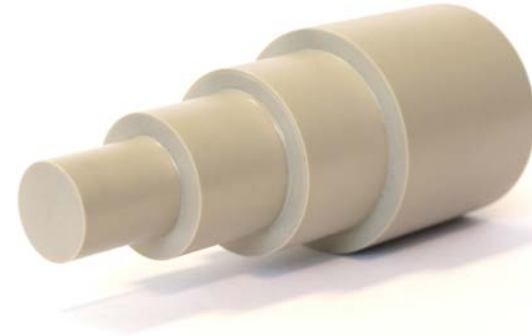


RHEOLOGY



APPLICATIONS & PROCESSING TECHNIQUES

GRADE	FORM	VISCOSITY	APPLICATION
KEPSTAN® PEKK 8000 SERIES - Highest thermo-mechanical properties			
8001	Pellets	High	Stock shape extrusion/Injection molding
8002	Pellets	Medium	Injection molding/Cable extrusion
8003	Pellets	Low	Base resins for compounds



GRADE	FORM	VISCOSITY	APPLICATION
KEPSTAN® PEKK 7000 SERIES - Films / Sheets / Composites			
7001	Pellets	High	Sheet extrusion/Thermoforming
7002	Pellets	Medium	Film & Cable extrusion
7002PL	50µm Powder	Medium	Fabric coating/Prepreg
7002PT	20µm Powder	Medium	UD Tapes
7003	Pellets	Low	Film extrusion
7003PL	50µm Powder	Low	Fabric coating/Prepreg
7003PT	20µm Powder	Low	UD Tapes



GRADE	FORM	VISCOSITY	APPLICATION
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KEPSTAN® PEKK 6000 SERIES - Highly versatile copolymer

6002	Pellets	Medium	Extrusion film/Sheet
6002PL	50µm Powder	Medium	Additive manufacturing/Powder coating
6002PT	20µm Powder	Medium	Powder coating
6003	Pellets	Low	Extrusion film
6003PL	50µm Powder	Low	Additive manufacturing/Powder coating



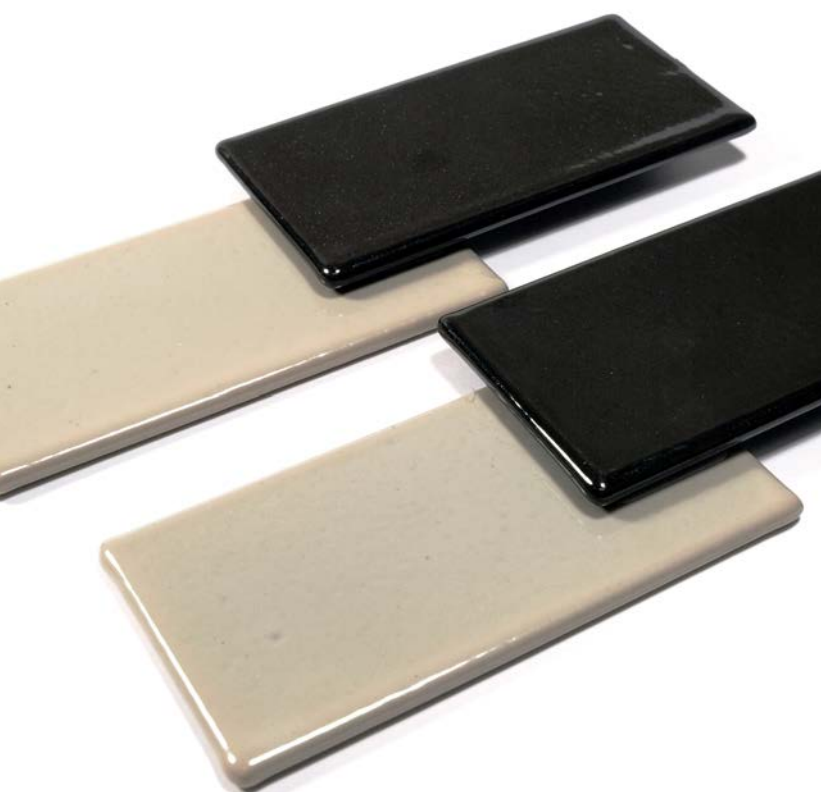
courtesy of HEXCEL



KEPSTAN® PEKK COMPOUNDS

GRADE	REINFORCEMENT	BASE POLYMER	APPLICATION
6010G30	30% Glass	6000	Injection molding Overmolding Stock shapes extrusion
8010G30	30% Glass	8000	
8020WM40	Tribo. Package	8000	
8010C30	30% Carbon	8000	
8010C40	40% Carbon	8000	

Injection molding
Overmolding
Stock shapes extrusion



courtesy of Axon Cable



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