



Product Portfolio  
High Performance Polymers

Grade Name & Polymer	General Properties	Thermal Properties	Segments
<b>Ryton®</b> PPS Polyphenylene sulfide	High modulus Chemical resistance Dimensional stability Inherently flame retardant	200°C (Short 260°C)	Automotive Electrical Industrial Appliances
<b>Udel®</b> PSU Polysulfone	Transparent High toughness and strength Inherently flame retardant Stability at PH 2-13	150°C (HDT 174°C)	Healthcare Water treatment Plumbing Membranes
<b>Veradel®</b> PESU Polyethersulfone	Transparent Chemical resistance Electrical properties Inherently flame retardant	-40°C to 200°C (HDT 204°C)	E&E Membranes Coating Healthcare
<b>Radel®</b> PPSU Polyphenylsulfone	Transparent Very high impact Chemical resistance Hydrolytic stability Inherently flame retardant	200°C (HDT 207°C)	Healthcare Plumbing Food service Aerospace
<b>KetaSpire®</b> PEEK Polyetheretherketone	Chemical Resistance Wear & Abrasion Resistance Fatigue Resistance High Limiting PV Inherently Flame Retardant	240°C (HDT 315°C)	Aerospace Automotive Healthcare Oil & Gas
<b>Avaspire®</b> PAEK Polyaryletherketone	Chemical Resistance Wear & Abrasion Resistance inherently Flame Retardant High Dimensional Stability Electrical Properties	240°C (HDT 315°C)	Aerospace Oil & gas Healthcare E&E
<b>Halar®</b> ECTFE Ethylene chlorotrifluoroethylene	High purity Surface smoothness Weatherability Release properties Inherently flame retardant	-80°C to 150°C	Coating Oil & Gas E&E Membranes Construction
<b>PTFE</b> Polytetrafluoroethylene	Chemically inert Low coefficient of friction Release properties Water repellent Inherently flame retardant	-260°C to 260°C	Coating Films Oil & Gas Industrial
<b>Solef®</b> PVDF Polyvinylidene fluoride	Chemical resistance Ageing resistance High purity Low gas & Liquid Permeability UV	150°C	Oil & gas Automotive Food & Pharma Construction
<b>Tecnoflon®</b> FKM / FFKM Fluoroelastomers / Perfluoroelastomers	Sealing at high temperatures Chemical resistance Weatherability	-60°C to 350°C	Automotive Wire & Cable Oil & Gas Healthcare
<b>Vespel®</b> PI Polyimide	Broad thermal range Low wear & friction at high PV Dimensional stability Inherently flame retardant	-273°C to 300°C (Short 400°C)	Automotive Aerospace Semiconductor processing
<b>Selcion®</b> LCP Liquid crystal polymer	Very high flow for thin walls Dimensional stability Low warpage and CLTE Inherently flame retardant	240°C (Short 340°C)	E&E
<b>Silastic®</b> FSR / F-LSR Fluorinated silicone rubber	High Chemical resistance Resistance to stress cracking Good compression set Wide range of Shore hardness High tear strength	-63°C to 225°C	Aerospace Automotive Oil/Gas/Petrochemical Industrial

# Comparison Table of Properties

	Chemical	Thermal		Wear & Friction	Electrical	Clarity
		High	Low			
<b>Ryton®</b> PPS	****	****	**	**	****	-
<b>Udel®</b> PSU	**	**	**	**	**	*****
<b>Veradel®</b> PESU	**	***	**	**	***	****
<b>Radel®</b> PPSU	***	***	**	**	**	****
<b>KetaSpire®</b> PEEK	****	****	**	****	*****	-
<b>Avaspire®</b> PAEK	****	****	**	****	*****	-
<b>Halar®</b> ECTFE	****	***	***	***	*****	**
<b>PTFE</b>	*****	****	*****	*****	*****	**
<b>Solef®</b> PVDF	***	**	**	***	***	-
<b>Tecnoflon®</b> FKM/FFKM	****	*****	***	**	**	-
<b>Vespel®</b> PI	**	*****	*****	****	****	-
<b>Selcion®</b> LCP	***	****	**	**	*****	-
<b>Silastic®</b> FSR/F-LSR	**	****	***	**	**	-



# The Biesterfeld Group

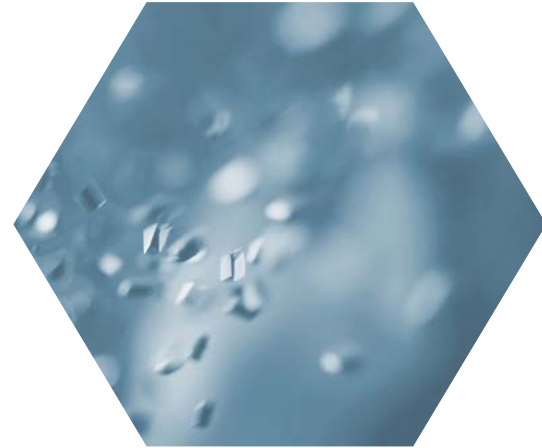
**Biesterfeld** – your international distribution partner in the field of plastics, rubber and specialty chemicals.

- › A fully family-owned group of companies with 117 years of business tradition
- › Business divisions: Biesterfeld Plastic, Biesterfeld Spezialchemie, Biesterfeld Performance Rubber
- › Focuses on specialised market know-how and application-based technical advice across numerous industries
- › Subsidiaries in more than 50 countries, serving more than 20,000 customers in more than 120 countries

## Biesterfeld Plastic

**Biesterfeld Plastic is a leading international distributor for the plastics industry in Europe, North Africa, Latin America and in the growth region South East Asia.**

- › Complete, homogeneous product portfolios in the areas of advanced polymers, engineering polymers, high performance polymers, performance elastomers and sustainable polymer solutions
- › Long-standing sales partnerships with leading international suppliers (e.g. Celanese, DuPont, ExxonMobil, INEOS, BASF, Solvay, CHIMEI and LG Chem) – mostly on an exclusive basis
- › Broad range of services: independent material recommendations, customised commercial and logistical solutions, advice on product development and process optimisation offers
- › Extensive decentralised sales network with local contact persons



## Biesterfeld Spezialchemie

**Biesterfeld Spezialchemie is one of the leading international distributors of specialty chemical products, pharma and food ingredients.**

- › Diverse product portfolio focusing on the requirements of selected industries, including composites and tooling, personal care and cleaning, healthcare, paints and coatings, adhesives, polyurethanes, construction, nutrition, food supplements, electric, electronic and energy
- › Active market development combined with high innovation capacities
- › Application-based laboratories
- › Customer-specific advice from specialists with solution-oriented technical expertise and extensive market know-how
- › Long-standing cooperations with leading global suppliers – mostly on an exclusive basis
- › Proximity to customers thanks to branches in Europe, North Africa, Latin America and in the growth region South East Asia



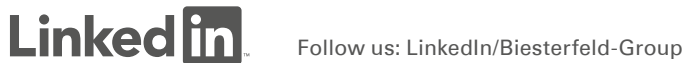
## Biesterfeld Performance Rubber

**Biesterfeld Performance Rubber is a leading international distributor for the rubber processing industry.**

- › A comprehensive product portfolio: high performance polymers, technical elastomers, additives and customised silicone rubber compounds
- › Application-based technical advice and innovative customer solutions, provided by local contact persons
- › Long-standing partnerships with global market leaders in the rubber industry
- › Local presence in Europe, Latin America, North Africa and in the growth region South East Asia







Local availability of products might differ from country to country.

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