

Advanced material solutions for medical syringes



Biesterfeld – Your Partner for Medical Polymers & Specialties

Medical syringes are critical medical devices requiring precision, safety, and regulatory compliance. At Biesterfeld, we offer a tailored portfolio of materials for both standard and pre-filled syringes, including high-performance polymers from INEOS (Eltex® MED), Vivion® COC, Santoprene™ MED, Exxon™ halobutyl, Liveo™ medical silicones and DYMAX® medical adhesives.

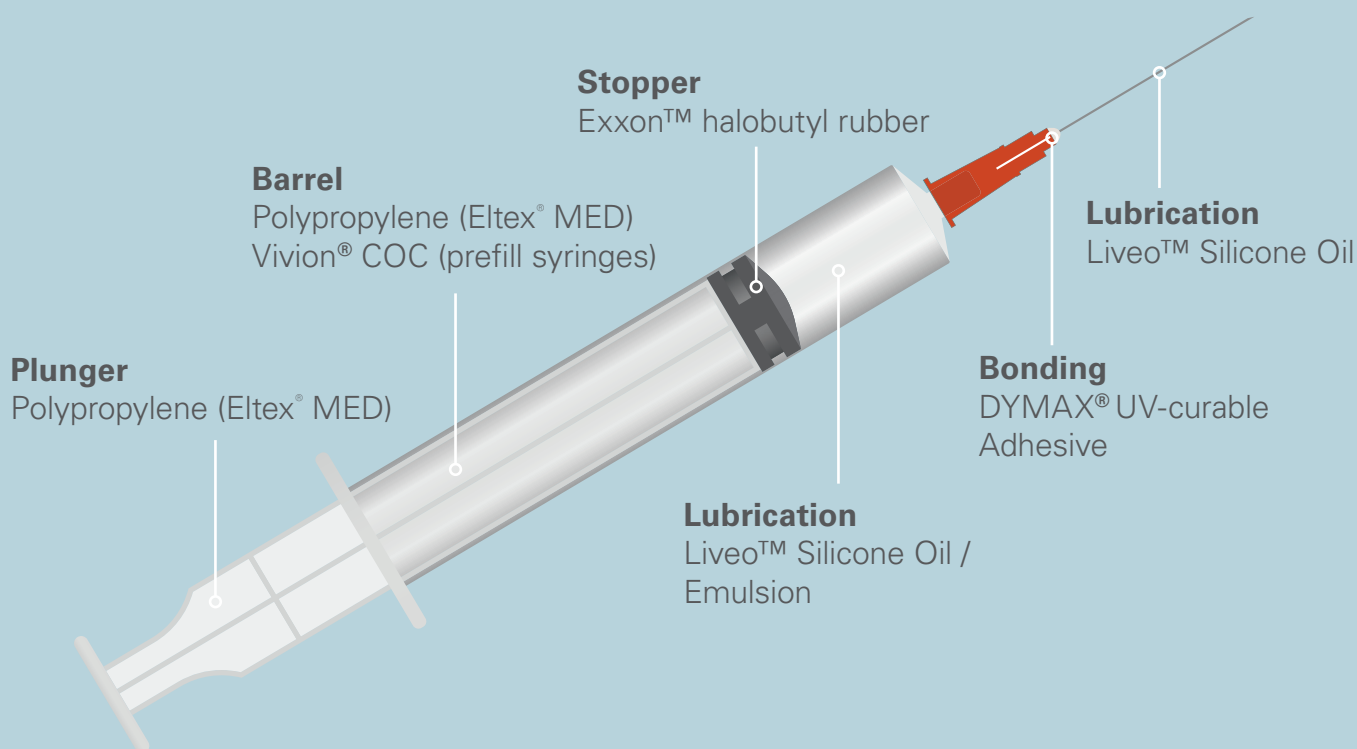
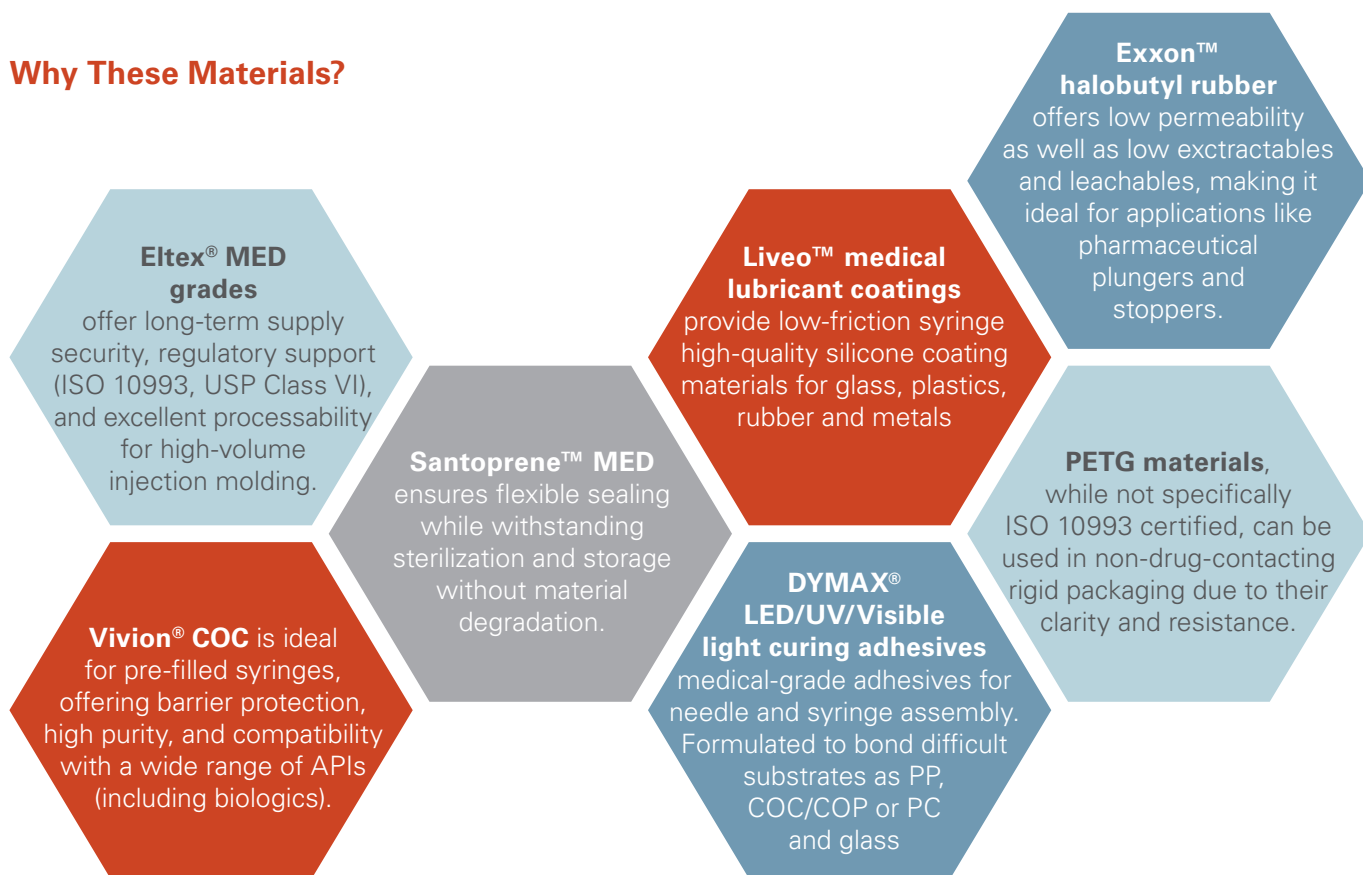
Recommended Materials & Functional Roles

Component	Material	Function & Benefits
Barrel	Polypropylene (Eltex® MED)	High transparency, dimensional stability, chemical resistance, gamma sterilizable
	Vivion® COC (for prefilled)	Superior moisture barrier, high purity, excellent optical properties
Plunger	Polypropylene (Eltex® MED)	Rigid, durable, good processability, biocompatibility
Plunger Seal	Santoprene™ MED (TPE)	Soft sealing, high elasticity, low compression set, medical regulatory compliance
Needle Hub	Polypropylene or Polycarbonate (PC)	High mechanical strength, compatibility with Luer-lock, tight dimensional control
Lubrication	Liveo™ medical lubricant coatings	Excellent lubrication and release characteristics, DMF, USP NF/Ph.Eur. compliant
Bonding	DYMAX® LED/UV/Visible light curing adhesives	Ideal for high-speed, high-volume automated syringe assembly, ISO 10993 compliant
Packaging (if required)	PETG (e.g. Skygreen®)	Transparent, impact-resistant trays (FDA/EU food grade – suitable for medical use)
Plungers, Stoppers	Exxon™ halobutyl	Low permeability, Low extractables and leachables



Interested to learn more about our medical solutions service portfolio? Feel free to contact us at healthcare@biesterfeld.com!

Why These Materials?



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