

CariflexTM Polyisoprene Products



Medical Applications

Pure. Strong. Soft. These are key attributes of the Cariflex[™] Polyisoprene product line. Available in both solid (IR) and latex (IRL) forms, Cariflex products are free of impurities that can cause allergies, discoloration, and odor. Cariflex polyisoprene offers a blend of purity, protection, and comfort that is unmatched by natural rubber (NR) latex or other synthetic rubbers. A clean, versatile alternative to NR latex, it is ideal for the manufacture of thin-walled products requiring strength and elasticity. A variety of process applications apply, Cariflex products can be dip molded, compression and injection molded, as well as extruded into a variety of applications. In most cases Cariflex Polyisoprene products can be processed on existing equipment used for NR/ NRL and therefore offer a drop-in solution that requires process adjustments only.

Extreme Purity

- High Purity Polyisoprene
- Free of impurities that cause allergic reactions to natural rubber
- Suitable for Medical and Food contact applications
- Ideal for industrial use requiring clean chemistries
- Suitable for Gamma, ethylene oxide or steam sterilization methods

Exceptional Protection

- Meet or exceed the stringent US and European, and Japanese government requirements for protection in surgical gloves, condoms, and medical stoppers
- Excellent relaxation behaviour and therefore less susceptible to leaking and coring from needles
- Delivers excellent comfort and protection

Extraordinary Comfort

- Soft and pliable to conform to surgeon's hands
- Skin like surface finish, with a pleasant touch and natural feel
- Ideal for gloves, medical stoppers, catheters, condoms and needle shields

Applications

- Surgical Gloves
- Condoms
- Medical Stoppers
- Catheters
- Probe Covers
- Cold Seal Adhesives
- Self-Adhering bandages

Cariflex[™] Medical Applications

Surgical Gloves

Cariflex products are superior alternatives to natural rubber for production of surgical gloves that require outstanding strength, reliable user protection and long-lasting wearer comfort. Moreover, they reduce potential exposure of physicians, nurses, and patients to naturally occurring latex proteins that cause Type I allergic reactions.

Performance benefits of Cariflex products include:

- Light color; nearly transparent
- Low odor (no ammonia needed in processing)
- Very soft
- Highly elastic for easy use
- High durability

Medical Stoppers

Medical stoppers are installed on IV bags and resealable pharmaceutical bottles to allow needle access to a fluid or medication without any residual leakage. Stopper materials must exhibit good coring resistance, i.e. accommodate needle insertion without generating minute rubber material fragments that can contaminate the medication. The same stopper products must be resealable and offer a low level of extractable impurities and comply with hygienic standards. Natural rubber is not used in this application for several years, partly because of potential Type 1 allergic reactions in patients sensitive to the naturally occurring proteins in those materials. Cariflex products are protein-free and provide the coring resistance and resealability needed for effective medical stopper applications. In addition, these high-purity polymers help reduce the possibility of drug contamination from the stopper even after aging.

Catheters

Cariflex Polyisoprene Products are high-purity alternatives to natural rubber for forming catheter balloons. The synthetic polymers exhibit consistent high-quality and easy processing, forming defect-free films with exceptional elongation at break, low modulus and high strength.

Key features include:

- Free of naturally occurring proteins that cause Type 1 allergic reactions in sensitive patients
- Sterilizable via gamma radiation
- Ultra soft, natural feel for enhanced patient comfort

Self Adhering Bandages

Soft, stretchable bandages that are self-adhering (i.e. do not stick to users' skin) are growing in popularity for improved patient comfort. The products are ideal for first aid to secure gauze in position and under slight compression without adhesive tape. Cohesive bandages are also well suited for use on delicate or traumatized skin and for compressing difficult-to-cover areas, e.g. sprained joints. The tough, resilient Cariflex products provides the comfort and reliability needed for the bandages. These high-purity materials that are free of natural rubber proteins also reduce the risk of Type 1 allergic reactions in sensitive patients.

Needle Shields

Prefilled syringes with a full range of needle sizes are completed by adding tip caps and needle shields. Typically, caps and shields are produced from natural rubber-free elastomers that are tough enough to withstand sterilization via ethylene oxide or steam and product assembly. Cariflex products can withstand sterilization methods like Gamma, ethylene oxide, or steam.

Probe Covers

Sterilizable Cariflex products are easy to process into thin films that exhibit good transparency for producing medical probe covers. This latex material does not contain natural rubber proteins to reduce possible Type 1 patient and technician allergic reactions. Cariflex Polyisoprene probe covers retain their shape to fit probes securely over time. The films are also durable and can withstand exposure to gels and fluids to which they may be exposed.

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