

## CREATING CUSTOM CAST FILMS AND MEMBRANES

Carestream Contract Manufacturing's precision coating and prototyping services enable cost-effective, large volume casting of polymer membranes and films.

Our coating assets feature the longest precision-controlled ovens in North America (up to 2,000 ft.), backed by stringent clean room, quality inspection and analytical testing practices. We produce extremely uniform custom cast films and membranes at high line speeds including silicone films, optically clear adhesives and thin polycarbonate films.

Our engineers apply their process knowledge, expertise handling multiple solvents, and established relationships with substrate and chemical suppliers to guide customers throughout the casting process. We create stand-alone "free films" by casting aqueous dispersions, polymers dissolved in organic solvents or 100% solids formulations. These solutions may be cast onto a release liner with specific properties to manage film quality and specific release requirements, or adhered to a desired substrate.

### Casting Capabilities:

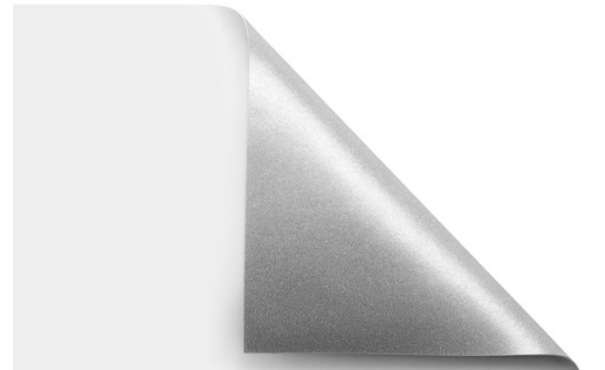
- Precision thickness uniformity as tight as  $\pm 1\%$
- On-site mixing of the formulation(s)
- Ability to handle chlorinated solvents
- Slot die and curtain coating
- Long zone-controlled dryers
- Clean room coating and drying
- Optional UV curing
- Multi-layer coating – additional layer(s) in-line
- Lamination of protective overlays
- 100% automated optical inspection

### Process Development Advantages:

- Lab, pilot and production coaters available to scale-up solution-cast products.
- Relationships with substrate/chemical suppliers

### Custom Cast Film and Membrane Product Expertise:

- Silicone film for display, lighting, medical and acoustic membranes
- Polycarbonate film
- Optically clear adhesives for touch screen and display applications
- Cast precision membranes
- Polyurethane film for wound care, ballistic glass, and medical devices
- Electro active polymers for haptic membranes, actuators, and energy generation
- PMMA film for display and solar
- PVDF film for automotive, aerospace, and architectural
- Electrodes for advanced batteries



### ABOUT CARESTREAM

#### Precision, Roll-to-Roll Contract Coating Services

Carestream builds on more than 100 years of precision coating leadership to develop a wide range of products for energy storage, display, medical, optical, electronic and other advanced materials applications. Customers leverage Carestream's aqueous and solvent coating expertise at bench, pilot and production-scale manufacturing for optimal product design, technology integration and support. Carestream also actively seeks growth partnerships, which combine customer product IP and market channels with its high speed roll-to-roll processing, quality systems and worldwide presence to bring new products through commercialization quickly and efficiently.

For more information, contact **Todd Arndorfer** at [info@tollcoating.com](mailto:info@tollcoating.com) to learn how Carestream can help develop your cast film or membrane products through commercial scale-up.