



# GOODYEAR'S NEWEST BLIMP TAKES TO THE SKIES, PROTECTED BY DUPONT™ TEDLAR® POLYVINYL FLUORIDE (PVF) FILM

## BACKGROUND

The Goodyear Tire & Rubber Company's newest blimp, launched in March, 2014, is flying with DuPont™ Tedlar® film, which protects the exterior of the airship from specific environmental threats – including UV rays, chemicals, and color fading – and also weighs less than envelope materials used on previous blimps.

The new blimp is a state-of-the-art airship that's larger, faster, and more maneuverable than previous models. In keeping with Goodyear's legacy as the world's leading builder and operator of airships, the new blimp eclipsed 80 miles per hour on one of its early voyages. Goodyear launched its first blimp in 1925, and since then the iconic blimps have appeared at news, entertainment and sporting events around the world.

One of the world's largest tire and rubber companies, Goodyear employs about 69,000 people and manufactures its products in 52 facilities in 22 countries around the world. During its long operational history, Goodyear has built more than 300 lighter-than-air vehicles, including two large rigid airships. The company first entered the fledgling aviation industry in 1910 with rubber impregnated fabrics and coatings for airplanes and lighter-than-air craft.

## CHALLENGE

The blimps, which represent one of the most recognizable brand icons in the world, play a pivotal role in Goodyear's promotional activities. Familiar not only for their shape and position in the sky, the blimps are also instantly recognizable thanks to the vivid blue-and-yellow of the Goodyear logo that's emblazoned on them.



The body, or envelope, comprising the airship's largest component, holds the helium that makes the blimp lighter than air. The new blimp has a volume of 297,527 cubic feet, and is 246 feet long – 50 feet longer than the previous blimp. The outer covering, or envelope, surrounds a semi-rigid internal structure, which is a departure from the unsupported envelopes used in previous Goodyear blimps.

Exposed to harsh elements and expected to last for decades (the GZ 20A airship, another in the Goodyear fleet, flew for 45 years), the envelope must ensure the highest levels of durability, weatherability and strength, all while being extremely lightweight. It has to be tough enough to resist fading, scuffing and hold up to solvents used during cleaning.



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### **SOLUTION**

To address these challenges and guarantee long-lasting protection for the new airship's envelope, Goodyear needed to find a solution that was proven, yet innovative.

After assessing a range of possible coatings, Goodyear chose a solution from DuPont. The new airship's outer envelope is coated with DuPont™ Tedlar® polyvinyl fluoride (PVF) film. The Tedlar® film will ensure that the material is protected from harsh weather, UV rays and chemicals, and keep the bright silver of the blimp from fading. For Goodyear, the fact that Tedlar® film is lighter than the material used on previous blimps is also important. And since Tedlar® film is receptive to paints, the graphics for the Goodyear logo could be applied to the envelope following construction.

"We chose Tedlar® PVF film because it has a unique combination of being lightweight, strong and flexible with exceptional long-term durability, even when exposed to a broad range of environmental extremes," said Dave Beasley, Director of Airship Operations, Goodyear.

DuPont invented Tedlar® polymer in the 1940s and by the 1950s began developing products based on the material. In the decades since, Tedlar® film has earned a reputation for its flexibility across a wide variety of applications and its remarkable staying power. The material used for the Goodyear blimp was produced at the DuPont Yerkes plant in Tonawanda, NY, where employees are justifiably proud of their contribution toward the look and longevity of Goodyear's newest blimp.

Recognized as the high-performance standard in aerospace, construction, transportation, electronics and other industries, Tedlar® film serves with proven durability in harsh operating environments. The highly versatile Tedlar® film, available in transparent, translucent and opaque pigmented films, can be obtained in thicknesses from 0.5 to 4.0 mil.

**For more information please visit: [www.tedlar.com](http://www.tedlar.com)**