HALLSTAR

PLASTICIZERS BENEFIT FOOTWEAR ELASTOMERS

APPLICATION CHALLENGE

Various elastomers are required to manufacture today's athletic footwear, such as styrene butadiene rubber (SBR), styrene-butadiene-styrene (SBS), butyl rubber and natural rubber. However, usability issues arise with color stability, flexibility and low-temperature performance.

HALLSTAR SOLUTION

Hallstar's ester plasticizers can improve elastomer performance, including wet traction, and they have a low toxicity profile. They are also available in dry Suprmix® form for easier handling and dispersion.

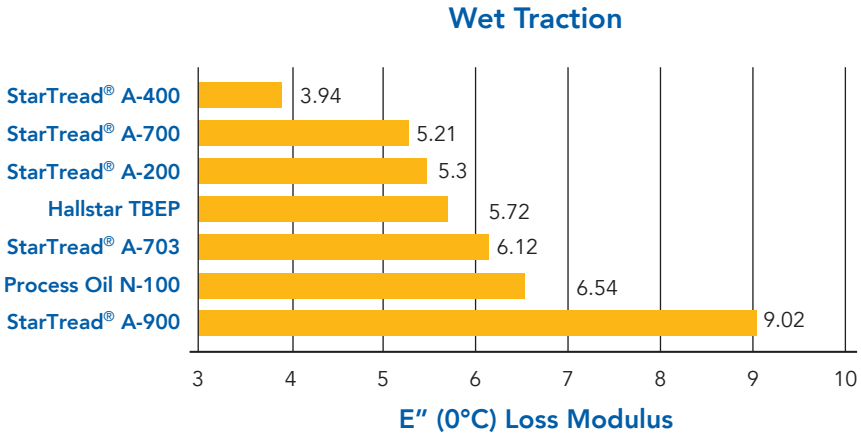
Plasthall® 185, Plasthall® DTDA – fully saturated aliphatic esters

- Improved flexibility
- Low-temperature usability
- Non-migration/non-bleeding
- Excellent color stability
- Low toxicity profile

StarTread® A-900

- Improved wet traction
- Non-skid on wet surfaces
- Permanent plasticization

The following graph and data tables illustrate that StarTread® A-900 offers 50 percent better wet traction than standard napthenic process oil.



Hallstar works collaboratively with companies around the world to create and enhance next-generation products.

Hallstar's expertise in polymer modification and optimization, coupled with our application knowledge across a wide range of industrial products, is unique in the specialty chemical industry. Our ability to create tailored solutions with esters—including phthalate replacement—is based on years of esterification experience.

LET'S WORK WONDERS™

www.hallstar.com