

French Process ZnO vs. American Process ZnO

Smithers Laboratories Testing Confirms Two Distinctly Different Products

A recent study by Smithers Laboratories concluded that French Process (FP) zinc oxide outperforms both American Process (AP) zinc oxide as well as commercial blends on a variety of key metrics. These findings, which resulted from testing three compounds (neoprene, tire wire coat, and new rolling resistance tire silica treads) have critical implications for a broad spectrum of ZnO applications. A link to the complete study can be found on our website at:

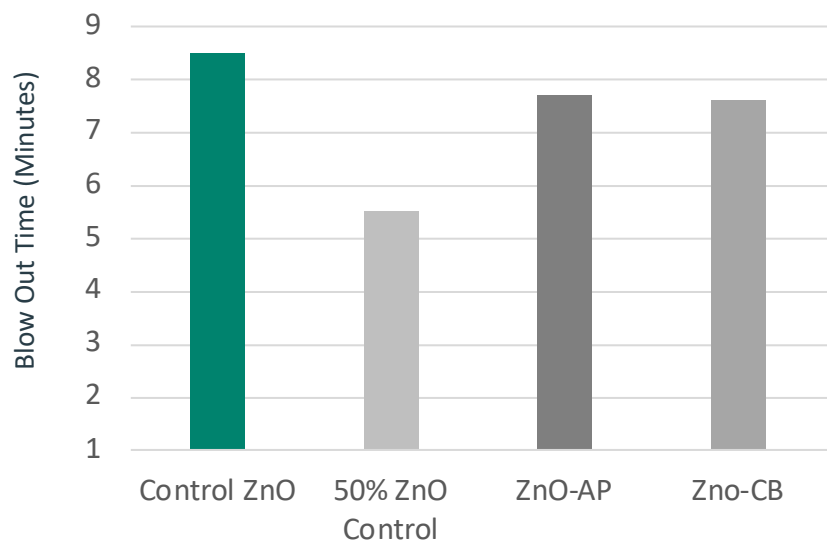
zochem.com/product/documents

What follows is an overview of the key findings, with page references.

Overview of Key Findings

- **AP performed 10% worse than FP on the Goodrich Flexometer Blowout times. (p. 23)**
- Cure time with FP was ~33% better than AP for MDR cure at 177C-, therefore FP ZnO is better for cycle time and production efficiency (energy, labor, conversion) (p. 15)
- DMA testing tan delta (-10C, 0C, 30C) showed 5-6% better results for FP vs. AP {tire wire coating} (p. 20)
- Low Viscous modulus shows improved cross-linking using FP vs. AP (strain test) (p. 24)
- Testing performed on newer higher silica, low rolling resistance formulae produced similar results as above (pp. 26-27)
- FP outperforms AP and Blend, particularly on tire wire coat compound and newer silica tread compound (for low rolling resistance)

Goodrich Blowout Times for Belt Skim Compounds for Different Zinc Oxide Samples (ASTM D623)



“Overall, the zinc oxide control, from the indirect French Process, outperformed the zinc oxide from the direct American Process and the typical high volume Commercial Blend (CB) zinc oxide that is used today.”

Pure, 100% French Process ZnO, GUARANTEED.

Due to the purity, performance and safety standards of our customers, Zochem produces French Process (FP) zinc oxide, exclusively. We will not blend or replace our product with AP ZnO, under any circumstances.

An article about the Smithers Laboratories study appeared in the March 3, 2023 issue of *Rubber News*. To download the complete white paper, “Quantifying Subtle Differences Among Different Grades of Zinc Oxide Used commercially in the Rubber industry by John Dick, Presented at the Fall Rubber Division, ACS IEC Meeting in October, 2022, [CLICK HERE](#) or [visit our website](#).”