



A Comparison of Rim Protection and The Impact of Corrosion

Reducing corrosion positively impacts overall performance and safety in OTR tire applications.

This paper explores the differences in tire and rim protection products in their ability to reduce corrosion. The test simulated approximately one year of field use in the extreme operating conditions of a Mining OTR tire.

Accella Tire Fill Systems

2003 Curtain Pole Road
Chattanooga, TN 37406
(800) 821-4147
accellatirefill.com



Putting TLC to the Test: Corrosion



► Overview

- Corrosion is one of the biggest detriments to mining equipment's wheels and tires. The damage caused by corrosion adversely impacts performance and makes equipment unreliable and unsafe.
- Due to its nontoxic, nonflammable, and nonhazardous formula, Accella's TLC Tire and Rim Protection liquid helps to prevent corrosion for longer tire life, easier tire changes, reduced downtime and costs, and overall safer operation.
- To prove the strength of TLC products, Applied Technical Services, Inc. (ATS) conducted a series of rigorous corrosion tests and compared them to other industry leading products.

Since 1967, ATS has served as a top tier consulting engineering firm and independent lab with extensive testing and inspection capabilities.

► About the Test



- For this corrosion test, ATS constructed specialized chambers to simulate approximately one year of field use in a Mining OTR tire that operates at up to 176°F (80°C) on a two-shift basis. To achieve this, corrosion testing was conducted at extreme temperatures of 212° (100°C) and 100 PSI (6.89476 Bar, 689.5 KPa).

The best measurement of corrosion is weight loss, as the process of corrosion is actually the reduction or deterioration of a metal by oxidation

► Proof of Performance

- At the end of a 35-day test, the sample steel coated in TLC PRO had only a 0.005% reduction in weight.
- The competitive sample had corroded over 2.5 times that of TLC PRO resulting in a significant weight reduction of 0.013%.



Competitive Product after just 2 weeks in the test chamber



TLC PRO after a full 7 weeks in the test chamber

- The significant difference in weight loss between the samples indicates a much higher level of corrosion protection from TLC products.
- Over time, the competition's accelerated rate of corrosion could likely lead to premature equipment failures, safety issues and increased downtime.