



their safety is essential.
Protecting people, property, and the planet.

Wheel Chocks: Urethane vs Rubber

Wheel Chock Market Landscape

Background:

Wheel chocks represent critical safety equipment in industrial, mining and aviation settings. Their proper and sustained use ensures that lives are protected, and such use is required by the DOT, NFPA, SAE and MSHA.

There are multiple wheel chocks on the market, including those constructed of aluminum, wood, rubber and urethane. Federal guidelines do not generally specify the type of material that must be utilized for industrial applications; however, rubber and urethane are the two most commonly selected by safety managers. Too often the final decision as to which chock to use is determined by chock cost. Unfortunately, this methodology is short-sighted when a long-term cost analysis is conducted as rubber has been shown to be less resistant to damage or breaking than urethane counterparts, thus requiring more frequent replacement and resulting in a higher cost.

A Comparison of Urethane Chocks Versus Rubber Chocks

Checkers began developing and testing urethane chocks in the late 1980s with a significant investment requiring extensive engineering and design. Testing initially included the comparison of the new urethane products against chocks made of various materials, including both metal and wood, as well as the more commonly utilized rubber.



Checkers model MC3011 urethane chocks

Greater Strength and Flexibility

Initial independent testing showed—and repeated subsequent testing has confirmed—the urethane chocks consistently had a higher load-bearing capacity than their rubber counterparts and were better able to absorb high impacts from heavy machinery. While mimicking the flexibility of rubber, urethane chocks also showed significantly greater strength and resistance to abrasion. Over time, the urethane chocks also proved to better withstand harsh working conditions and extreme weather.



Rubber chocks are more susceptible to cracking and breaking



***...urethane chocks
also showed
significantly greater
strength and
resistance to abrasion.***



Checkers urethane chocks model UC1500
used on a utility truck

Improved Ease of Use

Because of the risk of human error in the placement of wheel chocks, ease of use was also considered and evaluated by Checkers in multiple testing environments. Urethane chocks have been shown to be 20 to 50 percent lighter in weight than similarly sized rubber chocks, providing ease of carrying and transport. Urethane construction also allowed the molding of ANSI-compliant chocking guidelines into the chocks themselves; an option not available in traditional rubber manufacturing. Molding of built-in carrying handles was also shown to be of benefit to workers in multiple industrial applications.

Superior On-Site Visibility

The use of urethane in chock manufacture has allowed other features to promote safety and protect both lives and assets. One of the most impactful is the ability to produce the chocks in high-visibility safety colors, which further aids in proper chock placement as well as raising awareness for those walking or driving around equipment secured by these components. This is in stark comparison to the rubber chocks, which have not successfully been manufactured to incorporate safety colors.

Conclusion and Future Recommendations

When compared with rubber chocks of similar size and rating, independent testing of urethane chocks shows them to provide greater strength and flexibility, improved ease of use and superior on-site visibility. In addition, while rubber chocks are initially less expensive than rubber chocks, they must be replaced far more frequently than their urethane counterparts due to more rapid deterioration and their susceptibility to damage.

**For further information call 1-800-438-9336 or visit
us online at checkers-safety.com**

Checkers is a portfolio company of Justrite Safety Group. Justrite Safety Group is a growing family of leading industrial safety companies offering the world's most comprehensive safety portfolio—from the storage, containment and clean-up of hazardous materials to emergency showers, industrial matting and motion safety.