



Extended Wear of Single-Use Nitrile Gloves Briefing

Overview

SW® continues to make investments in manufacturing, hand health technologies, and testing processes to provide high quality performance products that alleviate the issues associated with wearing single-use gloves. This enables us to raise the bar of single-use nitrile glove expectations.

The coronavirus pandemic has resulted in PPE shortages and significant price increases. Recently, SW has addressed the global glove shortage by investigating performance characteristics of single-use nitrile gloves – such as user comfort and hand health – to understand the impact of long-term, repeated wear.

The SW R&D team tested MegaMan® MM-128-011-DRK/ECO-BK with DriTek® Sweat Management Technology for user comfort, physical performance, moisture absorption, and microbial growth. The team found that this product could withstand 3 days of use and application of commercial hand sanitizer spray with little measurable performance loss, reduction in hand health benefits, and comfort.

Key Findings

Extended Performance

The DriTek gloves are rated ANSI 3 in abrasion resistance and ANSI 1 in puncture resistance. Throughout the 3-day trial, the gloves retained over 75% of their tensile performance while puncture resistance remained consistent.

Extended Comfort

Over the 3-day period, the MegaMan gloves absorbed over 150% more sweat than what was absorbed by conventional single-use nitrile gloves. Sweat absorption was attributed to DriTek – the SW proprietary flock-lined technology that aids in sweat management and allows for more comfortable hands - use after use.

Extended Use

Wearers were able to easily don, doff, and redon MegaMan when compared to the standard single-use nitrile gloves - which were described as “sticky and clammy.” The flock lining allowed for easy on-and-off between uses.

Extended Life

Glove surfaces and interiors were sanitized after each day. The flock lining in the tested DriTek product was more effective at absorbing hand sanitizer when compared to the standard single-use nitrile glove. Microbial growth was lower, no spread was present, and there was no significant degradation due to repeated sanitization.

Conclusion

As PPE resources are in short supply and prices continue to drastically increase, we all must consider how reusing quality single-use nitrile gloves can be an economical and practical option. SW continues to change the perception of single-use gloves and push the boundaries of nitrile glove performance by exploring the capabilities of extended wear and repeated use.

