

ANTI-VIBRATION GLOVES

One of the ways to reduce the exposure to hand-arm vibration is to reduce the transmitted vibration. Several types of “anti-vibration” gloves are available on the market. These gloves contain a lining of resilient material at the areas of contact (palm and fingers) that is usually a gel, foam, or rubber-like material or an array of air bladders.

Gloves marketed as “anti-vibration” should have been tested and found to meet the requirements of ISO 10819:2013. This standard requires that the vibration transmissibility of the glove is measured over two specified frequency ranges. The tests must show a reduction in the measured vibration by at least 40% in the higher-frequency range (above 200 Hz) and by at least 10% in the lower frequency range.

Like other mechanical vibration isolators, gloves will generally perform best at the higher frequencies, above a resonance, with little effect at lower frequencies. Gloves can therefore pass the standard test and still produce very small reductions in the frequency-weighted vibration magnitude at the hand. The attenuation requirements are based on the average over a wide range of frequencies. Therefore, some gloves can increase the vibration magnitude in some parts of the frequency range and still meet the requirements of the standard.

Employers should therefore not rely on “anti-vibration” gloves to provide protection against vibration, and it is advisable to use them only where they demonstrably improve the operator’s comfort. Of course, it is almost certainly helpful to keep the hands (and body) warm and dry and good-quality industrial gloves, and other clothing, will often have an important part to play.

Source: “Patty’s Industrial Hygiene” 7th ed. p.180-181.

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