

TESTING OF HIGH-VISIBILITY SAFETY GARMENTS – PART I

Safety clothing is becoming a critical aspect of workplace health and safety regulations. In high-risk applications, particularly those involving moving vehicles or machinery, the use of specialty garments that provide high-visibility is essential. There are strict specifications around high-visibility garments to ensure these provide appropriate visibility across different weather conditions and types of work.

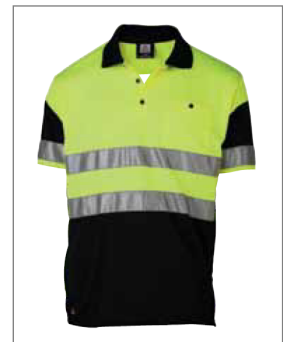
THE STANDARD FOR HIGH-VISIBILITY SAFETY GARMENTS

AS/NZS 4602.1:2011 was a joint Australian and New Zealand standard covering high visibility safety garments. It became AS only in 2020. The Standard outlines the strict design requirements of such garments and refers to another standard (AS/NZS 1906.4:2010) for the materials that are used in the garments. There have been 2 amendments post 2011, and it is currently under review as of this date (November 2021).

APPLICATION OF THE STANDARD

The Standard specifies:

- the allowable design features;
- the minimum amount and allowable position of background material for the front and back of the garment;
- the minimum amount and allowable position of the retro-reflective tape for the front and back of the garment; and
- how all measurements must be taken.



The design of the garments is based on the need for users to be highly visible regardless of the time of day. Conforming garments have been widely adopted for use in many other situations – farming, building sites, factories, warehouses, and recreational cycling and walking – virtually any situation where there is a need for the wearer to be seen at a distance.

CLASSES OF GARMENTS

There are three classes of garments covered under AS 4602.1:2011, each relating to the expected application for the garment. These classes are:

Class D – garments designed for daytime use only- these specify acceptable background material but have no retro-reflective elements.

Class N – garments designed for nighttime use only – the background material is less specific than Class D but must include retro-reflective tape

Class DN – garments designed for day and/or nighttime use - these are the most common garments and are a combination of compliant background material and retro-reflective tape



HIGH-VISIBILITY SAFETY GARMENT TESTING

In addition to the garment design, the specifications within AS 4602.1:2011 cover several durability and performance tests. Background material is tested for colour, luminance, and colour fastness to washing, perspiration and light. Additional testing will be conducted if garments are intended to be used in wet

weather. The retro-reflective tape used for Class N and DN garments is tested to ensure acceptable performance under a variety of conditions.

*If you are involved with manufacturing, importing or using high-visibility garments and want to ensure the garments are compliant with current standards, contact **NZWTA** on **+64 6 835 1086** or email: textiles@nzwta.co.nz*