

# TESTING OF HIGH-VISIBILITY SAFETY GARMENTS – PART III

## WAKA KOTAHI/NZ TRANSPORT AGENCY SPECIFICATIONS

### BACKGROUND

This is the third article in a series relating to information about high-visibility garments. The first two articles discussed requirements relating to *design* and *materials* used in these garments. This article provides details relating to additional specifications for garments as required by the New Zealand Transport Agency (NZTA).

### NZTA SPECIFICATIONS FOR HIGH-VISIBILITY SAFETY GARMENTS

Specifications for all temporary equipment (e.g., signs, signals, garments, and delineation devices) on roads under the jurisdiction of the NZTA are published in Section B of the Code of Practice for Temporary Traffic Management (COPTTM). This is Part 8 of the NZTA Traffic Control Devices (TCD) manual. The relevant section of the COPTTM is available for download at the NZTA website and is provided below:

[www.nzta.govt.nz/resources/code-temp-traffic-management/docs/copttm-section-b-4th-ed.pdf](http://www.nzta.govt.nz/resources/code-temp-traffic-management/docs/copttm-section-b-4th-ed.pdf)

The NZTA specification is based around AS 4602.1:2011 (formerly AS/NZS) and AS/NZS1906.4:2010, except with more detail and additional requirements. Retro-reflective tape and high-visibility background material must conform to AS/NZS1906.4:2010.



Figure 1: Sleeveless vest

### APPLICATION OF THE SPECIFICATION

There are four main garment design categories – sleeveless vests, long sleeve coats, overalls and miscellaneous (e.g., polo shirts, woven shirts, polar fleeces). All of these designs are closely specified in terms of garment length, shirt tails, tape length, tape configuration and logos. In addition, there are 4 special purpose garments.



Figure 2: Garment for site traffic management supervisors



Figure 3: Overalls

The NZTA COPTTM specifies two main colours with regards to use on New Zealand roads:

- **Yellow:** Garments for site traffic management supervisors - STMS; and
- **Orange:** Garments for all wearers other than supervisors

Pre-2018 Compliant garments with the COPTTM were labeled with the letters 'TTMC-W'. This changed to **TTMC-W17** in 2018 to reflect changes in AS 4602.1:2011. See later fact sheets regarding amendments to the NZTA CoPTTM.

The key differences between the general standards (AS 4602.1:2011 and AS/NZS1906.4:2010) and the NZTA COPTTM specification are summarised below:

AS 4602.1:2011 & AS/NZS 1906.4:2010	NZTA CoPTTM Specification
Minimum 0.2 m <sup>2</sup> of the background hi-visibility material on both front and back for all garment types.	Minimum area of background hi-visibility material is specified for each garment type for both and front. The amount varies per garment type. In all cases it is larger than 0.2 m <sup>2</sup>
The measurement is carried out using a hatched rectangle that goes to the waist for all garments, regardless of design.	The measurement is carried out using a hatched rectangle that extends over a larger area – to the bottom of vest coats and miscellaneous garments, and to the upper leg hoop of overalls.
Only wet weather garments are measured wet before and after light exposure.	The colour of the high visibility background material is measured both wet and dry before and after light exposure.
The permitted front opening may be no wider than 50 mm.	The permitted front opening may be no wider than 25 mm.
The design for all garments is not detailed.	The design for all garments is specified.
STMS, MTC, SP and TIM garments are not specified.	Specific requirements for STMS, MTC, SP and TIM garments in terms of background high visibility material, colour, design and labels
The size of any logos must be deducted from any background material measurements and must not interfere with the continuity of the background material.	Logos are restricted by size and location. STMS garments are restricted to the STMS label and technical recognition ID.
D, N and DN garments are permitted.	Only DN garments are included.
Different configurations are allowed. The dimensions are not closely specified.	The tape configuration is specified – belt and braces with shirt tail strip. The tape length and distance between braces is specified.
The standard allows flexibility on the inclusion of additional items such as pockets, logos, and ventilation gussets.	The standard is specific on the inclusions of other colours on the torso except for the tape, front opening, and logos.

## ADVICE ON HIGH-VISIBILITY SAFETY GARMENT TESTING

The NZTA Code of Practice for Temporary Traffic Management and the two key Standards for high-visibility garments (AS 4602.1:2011 for garment design and AS/NZS 1906.4:2010 for background materials and retro-reflective tape) provide a significant amount of detail and specification for manufacturers and users. NZWTA Ltd has a comprehensive understanding of the standards involved in high-visibility garment testing and can provide a report on the conformance to these standards.

*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](mailto:textiles@nzwta.co.nz)*