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No. 1349268.1

(Please quote this number in all correspondence)

CLIENT:
Pan Products Ltd.
PO Box 396
Dargaville 0340

SAMPLE RECEIVED FROM:
Pan Products Ltd.

Date: 9.10.20

Attn.: Nathan Cottle

SAMPLE DESCRIPTION:
Orange hi-vis garment: Reference Code PCF1019.

Client Order No.:

Client Reference:

1 of 9

CONFORMANCE TO NZ TRANSPORT AGENCY SPECIFICATIONS, EDITION 4 OF PART 8 CoPTTM, SECTION B, NOVEMBER 2018 (TTMC-W17) & TECHNICAL NOTES 24 JUNE 2019 & 1 JULY 2020

Section B3 High Visibility Garments

	Conformance
Background fabric Compliance, Section B3.1.1 (this section is not covered in full by IANZ accreditation)	Conforms (see NZWTA report no. 13/133R)
Retro- reflectivity, Section B3.1.2 (this section is not covered in by IANZ accreditation)	Conforms (as stated by SGS report no. SHSL1302029053TX & NZWTA report no. 1110548.3)
Retro-reflectivity, Section B3.1.2 – Orange Red Material for STMS Panel (this section is not covered in full by IANZ accreditation)	N/A
Logos, Section B3.2	N/A
Garment Compliance, Section B3.3	Conforms
Garment Design, Section B3.4.1	Conforms
Miscellaneous garments, Section B3.4.5	Conforms
STMS, Section B3.4.2.1	N/A
MTC Garment Sleeve, Section B3.4.2.2	N/A
Special Purpose Garment, Section B3.4.2.3	N/A
Traffic Incident Manager (TIM) Garment, Section B3.4.2.4	N/A

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C Judan
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Section B3 High Visibility Garments

Section B3.1.1 Fabric Colour Compliance

Requirement	Results	Conformance
Background material : Fluorescent or non-fluorescent orange-red or yellow to conform to AS/NZS 1906.4:2010, measured both dry & wet, light, perspiration and wash fastness.	See NZWTA report no. 13/133R.	Conforms

Section B3.1.2 Retro-reflectivity (Note: this section is not covered in full by IANZ accreditation)

Requirement	Results	Conformance
Retro- reflectivity material must comply with specification Class R or Class RF of AS/NZS 1906.4 :2010	See SGS report no. SHSL1302029053TX and NZWTA report no. 1110548.3.	Conforms (as stated by SGS & NZWTA reports)
STMS panel must comply with the colour specification for Class F background material: (photometric performance – 60 CIL/m ² at entrance angle 5.0°, observation angle 0.2° / plus colour coordinates only (excluding rainfall & luminance factor).	N/A	N/A

Section B3.2 Logos

Requirement	Results	Conformance
Lettering, symbols or logos must be on the wearer's upper front left of the garment (N/A to STMS & TIM)	N/A	N/A
The maximum area of any clear plastic pocket including items above is 7500mm ² (100 x 75 mm) (N/A to STMS & TIM)	N/A	N/A
A technical recognition ID, max 30mmx30mm (900 mm ²) may be added to the wearer's upper front right side of the garment.	N/A	N/A
A manufacturers label to a maximum size of 50 x 20 mm may be sewn or printed on the lower sleeve on non-high visibility material.	N/A	N/A

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Section B3 High Visibility Garments Section B3.3, Garment Compliance

Requirement	Results	Conformance
The tape must be a complete horizontal hoop at approximately waist level. A break at the front of no more than 25mm is permitted (see also Figure 5 of CoPTTM) (overalls are different).	There are breaks at the sides when the garment is laid flat (left - 7mm / right - 10mm). However, NZTA confirmed that this garment is compliant because the retroreflective hoop is covering both pocket edges.	/
Retro-reflective tapes must be no less than 50mm wide.	The tape is 50mm wide.	Conforms
Compliance must be achieved for a garment size designed to fit a body chest measurement 100-105 cm.	The size submitted is size L. Body chest measurement: 136 cm	Conforms
The letters TTMC-W17 must be included on the garment label.	The garment has no label. However, the client submitted a layout of the label with TTMC-W17 that will be used in the production process.	Conforms

Section B3.4 Garment Design

B3.4.1, B3.4.5 Miscellaneous garments- such as polo shirts, woven shirts, T shirts and polar fleece garments general requirements – based on AS 4602.1:2011 Amendment 1: 2016 & Amendment 2:2020 with additional requirements.

Requirement	Results	Conformance
The design must include a shirt tail that is 150 +5mm longer than the front. The shirt tail may be split, provided there is an overlap	There is a shirt tail on this garment. It is 149mm longer than the front.	Conforms
The minimum qualifying area measurement of background high visibility material for the recognised 100-105 cm chest size garment not covered by retro-reflective material or printing must be: - Front of garment: 0.24 m² . - Rear of garment including the 150mm shirt tail: 0.30 m² . Sleeves are not included in this area. Overall length at front not to exceed 710mm.	Front – excluding the reflective tapes and orange zips, the background material area is 0.37 m ² . Back – excluding the reflective tapes, the background material area is 0.41 m ² . Front length is 705mm.	Conforms Conforms Conforms

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Section B3 High Visibility Garments

Garment Design – continued B3.4.1, B3.4.5 Miscellaneous garments- such as polo shirts, woven shirts, T shirts and polar fleece garments.

Requirement	Results	Conformance
Background high visibility material must encircle the torso from the top, with no other colour except for: - Specified retro-reflective material - Permitted front opening - Permitted logo and technical ID area	Background high visibility material encircles the torso from the top. The exclusions are: - Specified retro-reflective material - Permitted front opening	Conforms
A permitted front opening to accommodate a zip fastener or similar closing device may be no wider than 25mm. Zip colour may be black but a colour matching the garment colour is preferred. Buttons, domes and similar closure devices must match the colour of the garment but need not to be compliant.	The garment has an orange zip front opening that is 20mm wide. The opening is down to the mid chest front of the garment.	Conforms
Garment may incorporate an underarm gusset (100mm max) as per AS/NZS 4602.1:2011 or up to three 10mm (max) eyelets per sleeve. Eyelets (any colour) but preferably match the colour of the garment.	N/A	N/A
Compliant retro-reflective material must be positioned to comply with the pattern in Figure 5: - belt and braces (front & back) or cross configuration at the back. - top and bottom of cross configuration must align vertically. - a strip of complying retro-reflective material must be located on the back of the garment from side seam to side seam positioned 50 ±5mm from the bottom hem.	There are vertical strips placed over the shoulders. The strips join up with a hoop on the front and the back (front - belt and braces pattern / back – cross configuration).	Conforms
	Top and bottom of cross configuration is aligned vertically.	Conforms
	There is an additional retro-reflective tape at the bottom of the garment positioned 50mm (widest) from the bottom hem.	Conforms

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Section B3 High Visibility Garments

Garment Design – continued B3.4.1, B3.4.5 Miscellaneous garments- such as polo shirts, woven shirts, T shirts and polar fleece garments

Requirement	Results	Conformance
Each brace must be spaced 170mm minimum apart at the belt, front and back.	The vertical strips are: front - 333mm apart back - 310mm apart	Conforms
Figure 5 diagram state that the length from the highest point of the shoulder to the waist tape must be 530 +20 mm .	Length from the highest point of the shoulder to the bottom waist hoop is: front - 520mm back - 520mm	Conforms
STMS & TIM only – The optional retroreflective cross configuration on the back of a garment is not permitted.	N/A	N/A
Long sleeved garments must have a compliant retro-reflective hoop on the arm between the elbow and the wrist.	There is a hoop between the elbow and wrist on both sleeves.	Conforms
An optional hoop may be placed on the sleeves above the elbow.	There is an optional hoop placed on the sleeves above the elbow.	Conforms
Long sleeves must be the same high visibility colour as the torso to a point no less than midway between the elbow and the wrist.	The sleeves are the same high visibility colour as the body.	Conforms
Short sleeves must remain the same colour as the garment.	N/A	N/A
Non-compliant colours may not be located within the qualifying area as trim or pocket flaps	There are no non-compliant colours within the qualifying area as trims or pocket flaps.	Conforms
Collars may be non-complaint colour and are deducted from the qualifying torso area	N/A	N/A
Non qualifying material may be placed below the hoop at the midpoint between the elbow and wrist.	NA	N/A

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Section B3 High Visibility Garments

Garment Design – continued B3.4.1, B3.4.5 Miscellaneous garments- such as polo shirts, woven shirts, T shirts and polar fleece garments

Section B3.4.2.1 STMS

Requirement	Results	Conformance
The background colour must be fluorescent or non-fluorescent yellow to conform to AS/NZS 1906.4:2010.	N/A	N/A
There must be a retro-reflective orange panel on the back and front left as per Fig 2A: Front - 100 x 100mm ±10mm Back - 250 x 130mm ±10mm Lettering must be black. Helvetica Bold Letter Height (front) - 35 ±5mm Letter Height (back) - 85 ±5mm	N/A	N/A

Section B3.4.2.2 Optional MTC Garment Sleeve

Requirement	Results	Conformance
The sleeve background colour must be fluorescent or non-fluorescent yellow to conform with AS/NZS 1906.4:2010.	N/A	N/A
Must have a compliant retro-reflective hoops on the arm above the elbow and between the elbow and the wrist on both sleeves.	N/A	N/A


Section B3.4.2.3 Special Purpose Garment

Requirement	Results	Conformance
Must have a compliant retro-reflective hoops on the arm above the elbow and between the elbow and the wrist on both sleeves.	N/A	N/A
Non-compliant colour may be added below the retro-reflective hoop positioned at approximate midpoint between the wrist and elbow.	N/A	N/A
Non-compliant colour (matching the lower sleeves) at the front of the garment is extended by 150mm to equal the length at the back of the garment.	N/A	N/A

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Section B3.4.2.4 Traffic Incident Manager (TIM) Garment

Requirement	Results	Conformance
Retro-reflective elements must be compliant red and white/silver checkered material as shown in Figure 2D.	N/A	N/A
Long sleeve colour must be fluorescent yellow.	N/A	N/A
Each sleeve must have a compliant red and white/silver reflective hoop positioned between the wrist and elbow.	N/A	N/A
TIM badge (silver colour only) must comply with AS/NZS 1906.4 min. photometric performance (Entrance Angle 5 & Observation Angle 0.20 only)	N/A	N/A
There must be a retro-reflective white/silver TIM badge positioned: Front – upper front length Back – upper centre back Size: Front – 80 ±5mm wide x 110 ±10mm deep Back – 240 ±10mm wide x 110 ±10mm deep Red Border Colour: 5 ±2mm Letter Colour – Red Letter Font – Helvetica Bold TIM Font Height: Front – 25 ±3mm Back – 50 ±5mm Words Font Height: Front – 7-10mm Back – 12-15mm	N/A	N/A
TIM must display personal ID in a clear pocket measuring a max. of 95mm x 60mm on the upper right front of the garment.	N/A	N/A

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