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## No. 1244376.8

(Please quote this number in all correspondence)

CLIENT:  
Pan Products Ltd.  
PO Box 396  
Dargaville 0340

SAMPLE RECEIVED FROM:  
Pan Products Ltd.

Date: 12.9.18

Attn.: Nathan Cottle

SAMPLE DESCRIPTION:  
PCF1016 "X" back TTMC-W17 orange polar fleece pullover, size L.

Client Order No.:

Client Reference:

1 of 8

**CONFORMANCE TO NZ TRANSPORT AGENCY SPECIFICATIONS, EDITION 4 OF PART 8 CoPTTM, SECTION B, FEBRUARY 2017 (TTMC-W17) & TECHNICAL NOTE: REVISED REQUIREMENT FOR HIGH VISIBILITY GARMENTS, SEPTEMBER 2017**


**Section B3 High Visibility Garments**

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

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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 wet and dry, 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 Must comply with specification " R " of AS/NZS 1906.4 :2010	See SGS report no. SHSL1302029053TX & NZWTA report no. 1110548.3.	Conforms (as stated by SGS & NZWTA reports)
Retro-reflective orange red material for STMS must comply with the colour specification for Class F background material as noted in Clause B3.1.2 (photometric performance & colour coordinates only)..	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)	N/A	N/A
The maximum area of any clear plastic pocket is 7500mm <sup>2</sup> (100 x 75 mm) (N/A to STMS)	N/A	N/A
A technical recognition ID, max 30mmx30mm (900 mm <sup>2</sup> -) 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 CoPTTM).	The tape is a complete horizontal hoop. There are no breaks at the sides or in the braces.	Conforms
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 (100-105 chest measurement). Body chest measurement: 137 cm	Conforms
The letters TTMC-W17 must be included on the garment label.	The letters are not included on the garment 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, (small size) general requirements – based on AS/NZS 4602.1:2011/Amendment 1:Nov. 2016 with additional requirements.**

Requirement	Results	Conformance
The design must include a shirt tail that is 150 +5mm longer than the front.	There is a shirt tail on this garment. It is 145mm longer than the front.	Conforms
The minimum qualifying area measurement of background high visibility material for the recognised 100-105 cm test size garment not covered by retro-reflective material or printing must be: - Front of garment <b>0.24 m<sup>2</sup></b> . - Rear of garment including the 150 mm shirt tail <b>0.30 m<sup>2</sup></b> . Sleeves are not included in this area. Overall length at front not to exceed 710mm.	<b>Front</b> – excluding the reflective tapes, orange pocket zip and orange zip front opening, the background material area is 0.35 m <sup>2</sup> . <b>Back</b> – excluding the reflective tapes, the background material area is 0.41m <sup>2</sup> .  Front length is 690mm.	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. Buttons, domes and similar closure devices must match the colour of the garment but need not to be compliant.	The garment has an orange front opening that is 10mm wide. The opening is down to the mid chest front of the garment.	Conforms
Garment may incorporate an underarm gusset as per AS/NZS 4602.1:2011 or up to three 10mm (max) eyelets per sleeve to provide underarm ventilation. Eyelets should 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 <b>50 ±5mm</b> 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).  Top and bottom of cross configuration is aligned vertically.  There is an additional retro-reflective tape at the bottom of the garment positioned 50mm from the bottom hem.	Conforms  Conforms  Conforms

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**Section B3 High Visibility Garments**

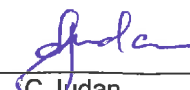
**Garment Design – continued B3.4.1, B3.4.5 Miscellaneous garments- such as polo shirts, woven shirts, T shirts and polar fleece garments**

Requirement	Results	Conformance
Each brace must be spaced 170mm minimum apart at the belt, front and back.	The vertical strips are: front - 330mm apart back - 318mm apart	Conforms
Figure 5 diagrams state that the length from the highest point of the shoulder to the waist tape must be <b>530 ±20 mm</b> .	Length from the highest point of the shoulder to the bottom waist hoop is: front - 510mm back - 510mm	Conforms
STMS 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

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**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
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

**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
Must be on a retro-reflective orange panel on the back and front left as per Fig 2 – front 150 x 150 mm, back 300 x 150 mm, both ±10 mm Lettering must be black Helvetica Bold Front 50 ±2mm high (Technical Note) Back 100 ±2mm high (Technical Note) Dispensation Jan. 2018: ±5mm front & back.	N/A	N/A

**Optional MTC Garment Sleeve Section B3.4.2.2**

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 hoop on the arm above the elbow and between the elbow and the wrist.	N/A	N/A

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