TEST REPORT

Shanghai

CTC Shanghai
5F Annex Dragon Pearl Plaza
2123 Pudong Avenue
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TESTING
CNAS L4577

Report No.: SH62440R3-14
(This test report supersedes the report SH62440R2-14 issued on November 12, 2014)

November 25, 2014

APPLICANT:
Vicsa Steelpro Colombia S.A.S.

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Test(s) requested : -- **Product Category :** -- **Product Type :** --
Sample description: Multiflex Latex Eco

Style / Article no.:	301000780620 301000780621 301000780622	**Buyer:**	COLOMBIA
Ref no.:	Multiflex Latex Eco	**Exported to:**	COLOMBIA
		Date of receipt of application form:	October 24, 2014
Order no.:	--	**Date of receipt of sample:**	October 24, 2014
End use:	--	**Testing period:**	October 24, 2014-- October 31, 2014
Number of sample(s)	SEVERAL PAIRS OF SAMPLES	**Service required:**	REGULAR

1. Conclusion:

	Testing	Result	Combine / Separate Test Item(s)	Failed Test Item(s)
	Dexterity of glove	**Level 5**	**(S01)**	**--**
	Sizing of glove	**7, 8, 9, 10**	**(S01)(S05)(S06)(S07)(S08)(S09)(S10)(S11)**	**--**
	Abrasion resistance of glove	**Level 2**	**(S02)**	
	Blade cut resistance of glove	**Level 2**	**(S02)**	**--**
	Tear resistance of glove	**Level 3**	**(S02)**	**--**
	Puncture resistance of glove	**Level 1**	**(S02)**	**--**
	Azo dyes	**P P P**	**(S02)(S03)(S04)**	**--**
	pH value	**P P P**	**(S02)(S03)(S04)**	**--**
■	**Dimethyl Fumarate Content**	**P**	**(S02)**	**--**
	Tin detection	**P**	**(S02)**	**--**
	Cadmium detection	**P**	**(S02)**	**--**

■This test is not covered by CNAS accreditation.

***Note:* P: Pass F : Fail**

Comments:
For the submitted samples, the Dexterity got level 5; the expect size of gloves 7, 8, 9, 10 passed the requirement and the pH value tests passed the requirement according to EN420 standard.
The Abrasion resistance of glove got level 2; Blade cut resistance of glove got level 2; the Tear resistance of glove got level 3; the Puncture resistance of glove got level 1 according to EN388 standard.
All the other tests passed the requirements.

Approved by

Original Signed
Henry YAN
Lab Manager

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2. Label(s) on the sample(s):

Sample(s)	Size	Style / Article no.:	Sub-sample(s)	Component(s)	Colour
(01)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/Yellow
			(b)	Palm	Dark blue
			(c)	Back	Grey
			(d)	Cuff	Grey
(02)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/Yellow
(03)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/Green
(04)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/ Green
(05)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/Blue
(06)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/ Blue
(07)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/Brown
(08)	--	301000780620 301000780621 301000780622	(a)	Glove	Dark blue/Grey/Brown

3. Sample(s) description assigned by laboratory:

Test item	Sample(s)	Combine / Separate sub-sample(s)
(S01)	(01)	(a)
(S02)	(01)	(b)
(S03)	(01)	(c)
(S04)	(01)	(d)
(S05)	(02)	(a)
(S06)	(03)	(a)
(S07)	(04)	(a)
(S08)	(05)	(a)
(S09)	(06)	(a)
(S10)	(07)	(a)
(S11)	(08)	(a)

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4. Testing result:

4.1 EN 420

	TEST METHOD	Test item(s) (S01)	Requirement	P/F
1	**Dexterity of glove #** **(EN 420:2003 §6.2+A1:2009)** Highest value of four tests : Performance Level :	 5.0 5	 --- ---	 ---

Note: *P: Pass F: Fail*

	TEST METHOD	Test item(s)		Requirement	P/F
2	**Sizing of glove*** **(EN 420:2003 §6.1+A1:2009)** S01 S05	Total length (mm) 233 235	Glove Size 7	7	**P**

Note: *P: Pass F: Fail*

	TEST METHOD	Test item(s)		Requirement	P/F
3	**Sizing of glove*** **(EN 420:2003 §6.1+A1:2009)** S06 S07	Total length (mm) 240 241	Glove Size 8	8	**P**

Note: *P: Pass F: Fail*

	TEST METHOD	Test item(s)		Requirement	P/F
4	**Sizing of glove*** **(EN 420:2003 §6.1+A1:2009)** S08 S09	Total length (mm) 254 257	Glove Size 9	9	**P**

Note: *P: Pass F: Fail*

	TEST METHOD	Test item(s)		Requirement	P/F
5	**Sizing of glove*** **(EN 420:2003 §6.1+A1:2009)** S10 S11	Total length (mm) 261 262	Glove Size 10	10	**P**

Note: *P: Pass F: Fail*

*Remark: Only two samples were measured for each sizing.

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4.2 EN 388

	TEST METHOD	Test item(s) (S02)		Requirement	P/F
1	**Blade cut resistance of glove #** **(EN 388:2003 §6.2)**	Index (I)			
	Sequence	Test 1	Test 2		
	1	4.2	3.1		
	2	4.4	2.9		
	3	2.9	2.4		
	4	3.0	2.5		
	5	3.1	2.5		
	Average (I):	3.5	2.7		
	Lowest average value (I) :	2.7		---	
	Performance Level :	2		---	---
2	**Tear resistance of glove #** **(EN 388:2003 §6.3)**				
	Lowest value of four tests (N):	58		---	
	Performance Level :	3		---	---
3	**Puncture resistance of glove #** **(EN 388:2003 §6.4)**				
	Lowest value of four tests (N):	29		---	
	Performance Level :	1		---	---
4	**Abrasion resistance of glove #** **(EN 388:2003 §6.1)**				
	Lowest value of four tests :	700		---	
	Performance Level :	2		---	---

Refer to the below page for details of the performance level of glove.

Note: *P: Pass F: Fail*

Table of Performance Level for Glove

Test Item	Performance Level					
	0 ##	1	2	3	4	5
Abrasion Resistance (EN 388:2003 §6.1) Number of cycles (minimum)	< 100	100	500	2000	8000	---
Blade Cut Resistance (EN 388:2003 §6.2) Index (I) (minimum)	< 1.2	1.2	2.5	5.0	10.0	20.0
Tear Resistance (EN 388:2003 §6.3) Force (N) (minimum)	< 10	10	25	50	75	---
Puncture Resistance (EN 388:2003 §6.4) Force (N) (minimum)	< 20	20	60	100	150	---
Dexterity (EN 420:2003 §6.2+A1:2009) Diameter of pin (in mm)	---	11.0	9.5	8.0	6.5	5.0

Performance level 0 means the glove falls below the minimum performance level for the given individual hazard.

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4.3 Azo dyes

	TEST METHOD	Test Items (S02)	Client Requirement	P/F
1	**Azo dyes* (mg/kg) (EN 14362-1:2012)**	<5	≤30	**P**

	TEST METHOD	Test Items (S03)	Client Requirement	P/F
2	**Azo dyes* (mg/kg) (EN 14362-1:2012)**	<5	≤30	**P**

	TEST METHOD	Test Items (S04)	Client Requirement	P/F
3	**Azo dyes* (mg/kg) (EN 14362-1:2012)**	<5	≤30	**P**

Note: *P: Pass F: Fail*

**Test method according to EN 14362-1:2012 or EN ISO 17234-1:2010 or EN 14362-3:2012 or EN ISO 17234-2:2011. Removal of fat by n-hexane (in case of leather), treatment with citric buffer, reductive cleavage with sodium dithionite, extraction with ether, detection by GC/MS and/or HPLC/DAD. (Detection limit: 5 mg/kg)*

List of aromatic amines
(Detection limit: 5mg/kg)

Benzidine
4-Aminobiphenyle
4-Chloro-O-Toluidine
2-Naphthylamine
O-Aminoazotoluene
5-Nitro-O-Toluidine
4-Chloroaniline
4-Methoxy-M-Phenylenediamine
4,4'-Diaminodiphenylmethane
3,3'-Dichlorobenzidine
3,3'-Dimethoxybenzidine
3,3'-Dimethylbenzidine
4,4'-Methylenedi-o-Toluidine
P-Cresidine
4,4'-Methylene-BIS-(2-Chloroaniline)
4,4'-Oxydianiline
4,4'-Thiodianiline
O-Toluidine
2,4,5-Trimethylaniline
4-Methyl-M-Phenylenediamine
O-Anisidine
4-Aminoazobenzene
2,4 Xylidine
2,6 Xylidine

Interpretation of test results:

(1) In the case of levels per amine component <=30 mg/kg: Not detected. According to the analysis as carried out, azo colourants banned under the ordinance on commodities were not detected in the article submitted.
(2) In the case of levels per amine component >30 mg/kg: The analysis result suggests that the article submitted has been manufactured or treated by using azo colourants banned under the ordinance on commodities.
(3) In case of a result between 25 and 35 mg/kg: We remark that due to the error range of the method, these measurement values represent a border line case.
(4) For determination of 4-Aminoazobenzene, EN 14362-3:2012 or EN ISO 17234-2:2011 will be performed on the sample.

4.4 pH value

According to EN ISO 3071:2006

TEST METHOD	Test Items (S02)	(S03)	(S04)	Client's Requirement	P/F
pH value Average value(nearest to 0.1)	8.8	8.1	7.7	>3.5 & <9.5	**PPP**

Note: *P: Pass F: Fail*

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4.5 Dimethyl Fumarate Content:

	TEST METHOD	Test Items (S02)	Requirement	P/F
1	**Dimethyl Fumarate Content (CAS: 624-49-7) (ISO/TS 16186: 2012)** Detection Limit: =0.1mg/kg	<0.1	＜0.1	**P**

Note: *P: Pass F: Fail*

Remark:
Laboratory Reporting Limit = 0.1 mg/kg
Mg/kg = milligram per kilogram
ND = Not detected
Method: Sample was extracted with organic solvent and analyzed by Gas Chromatograph Mass Spectrometer.

4.6 Tin Detection:

TEST METHOD	Test Items (S02)	Requirement	P/F
Tin XRF Screening (With reference to ASTM F 2617-08) Metal Content in (mg/kg or ppm)	<350	<350	**P**

Note: *P: Pass F: Fail*

4.7 Cadmium Detection:

TEST METHOD	Test Items (S02)	Requirement	P/F
Cadmium XRF Screening (With reference to ASTM F 2617-08) Metal Content in (mg/kg or ppm)	<100	<100	**P**

Note: *P: Pass F: Fail*

- End of report -

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