



CTC Shanghai
5F Annex Dragon Pearl Plaza
2123 Pudong Avenue
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TEST REPORT

Report No.: SH60641-10



TESTING
CNAS L4577
August 31, 2010
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APPLICANT:
Shandong Dengsheng Safety Products Co.,Ltd.

Ms. Sophia Lee
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Province, China
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Test(s) requested : --
Product Category : --
Product Type : --
Sample description: 13 GAUGE CUT-5 LINER PU PALM COATING

Style / Article no.:	C1002	Buyer:	--
Ref no.:	CUT-5/PU	Exported to:	--
Order no.:	--	Date of receipt of application form:	August 24, 2010
End use:	--	Date of receipt of sample:	August 24, 2010
Number of sample(s)	SEVERAL PAIRS OF SAMPLES	Testing period:	August 24, 2010-- August 31, 2010
		Service required:	REGULAR

1. Conclusion:

Testing	Result	Combine / Separate Test Item(s)	Failed Test Item(s)
Dexterity	Level 5	(S01)	--
Sizing of glove	7,8,9,10,11	(S01)(S05)(S06)(S07)(S08)	--
Tear resistance of glove	Level 4	(S01)	--
Abrasion resistance	Level 4	(S01)	--
Puncture resistance of glove	Level 2	(S01)	--
Blade cut resistance of glove	Level 5	(S01)	--
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)	--

■ This test is not covered by CNAS accreditation.

▲ The test was carried out by external laboratory assessed as competent

Note: P: Pass F: Fail

Comments:

For the submitted sample, the Dexterity got level 5; the Sizing of glove were 7,8,9,10,11, the pH value passed the requirement according to EN420 standard.
The Abrasion resistance of glove got level 4; the Blade cut resistance of glove got level 5; the Tear resistance of glove got level 4; the Puncture resistance of glove got level 2 according to EN388 standard.
All the other tests passed the requirements.

Approved by

Original Signed

Alex SHI
On behalf of
Henry YAN
Lab Supervisor

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

Sample(s)	Size	Style / Article no.:	Sub-sample(s)	Component(s)	Colour
(01)	7	C1002	(a) (b) (c) (d)	Glove Palm Back Cuff	Grey Grey Grey Grey
(02)	8	C1002	(a)	Glove	Grey
(03)	9	C1002	(a)	Glove	Grey
(04)	10	C1002	(a)	Glove	Grey
(05)	11	C1002	(a)	Glove	Grey

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)



4. Testing result:

4.1 EN 420

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

Note: P: Pass F: Fail

TEST METHOD	Test item(s)						Requirement	P/F
	(S01)		(S05)		(S06)			
2 Sizing of glove (EN 420:2003 §6.1)	Total length (mm)	Size	Total length (mm)	Size	Total length (mm)	Size		
Test 1	230	7	240	8	251	9	---	---
Test 2	230	7	240	8	252	9	---	---
Test 3	230	7	240	8	252	9	---	---
Test 4	231	7	240	8	252	9	---	---

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TEST METHOD	Test item(s)				Requirement	P/F
	(S07)		(S08)			
3 Sizing of glove (EN 420:2003 §6.1)	Total length (mm)	Size	Total length (mm)	Size		
Test 1	261	10	270	11	---	---
Test 2	262	10	270	11	---	---
Test 3	260	10	270	11	---	---
Test 4	262	10	270	11	---	---

Note: P: Pass F: Fail

4.2 EN 388

TEST METHOD	Test item(s)		Requirement	P/F
	(S01)			
1 Blade cut resistance of glove # (NF EN 388:2004 §6.2)	Index (I)			
Sequence	Test 1	Test 2		
1	30.9	84.1		
2	36.8	71.9		
3	30.6	64.0		
Average (I):	32.8	73.3		
Lowest average value (I) :	32.8		---	---
Performance Level :	5		---	---
2 Tear resistance of glove # (NF EN 388:2004 §6.3)	182.3		---	---
Lowest value of four tests (N):	4		---	---
Performance Level :				
3 Puncture resistance of glove # (NF EN 388:2004 §6.4)	89.7		---	---
Lowest value of four tests (N):	2		---	---
Performance Level :				
4 Abrasion resistance of glove # (NF EN 388:2004 §6.1)	>8000		---	---
Lowest value of four tests :	4		---	---
Performance Level :				

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

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Table of Performance Level for Glove

Test Item	Performance Level					
	0 ^{##}	1	2	3	4	5
Abrasion Resistance (NF EN 388:2004 §6.1) Number of cycles (minimum)	< 100	100	500	2000	8000	---
Blade Cut Resistance (NF EN 388:2004 §6.2) Index (I) (minimum)	< 1.2	1.2	2.5	5.0	10.0	20.0
Tear Resistance (NF EN 388:2004 §6.3) Force (N) (minimum)	< 10	10	25	50	75	---
Puncture Resistance (NF EN 388:2004 §6.4) Force (N) (minimum)	< 20	20	60	100	150	---
Dexterity (EN 420:2003 §6.2) 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.

4.3 Azo dyes

TEST METHOD	Test Items (S02)	Client Requirement	P/F	
				1

TEST METHOD	Test Items (S03)	Client Requirement	P/F	
				2

TEST METHOD	Test Items (S04)	Client Requirement	P/F	
				3
4	Azo dyes* (mg/kg) (EN 14362-1:2003)	<10.0	≤30	P

Note: P: Pass F: Fail

*Test method according to EN14362-1:2003, EN14362-2:2003 or CEN ISO/TS17234:2003 or §64 LFGB B 82.02-9:2006. 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	3,3'-Dimethoxybenzidine	O-Anisidine
4-Aminodiphenyl	3,3'-Dimethylbenzidine	4-Aminoazobenzene
4-Chloro-O-Toluidine	4,4'-Methylenedi-o-Toluidine	
2-Naphthylamine	P-Cresidine	
O-Aminoazotoluene	4,4'-Methylene-BIS-(2-Chloroaniline)	
5-Nitro-O-Toluidine	4,4'-Oxydianiline	
4-Chloroaniline	4,4'-Thiodianiline	
4-Methoxy-M-Phenylenediamine	O-Toluidine	
4,4'-Diaminodiphenylmethane	2,4,5-Trimethylaniline	
3,3'-Dichlorobenzidine	4-Methyl-M-Phenylenediamine	

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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 polyester blend sample, two test methods (EN 14362-1:2003 and EN 14362-2:2003) are performed on the sample, result of either one test method or both test methods shown any forbidden amines with content greater than 30 mg/kg will be considered as detected.
- (5) For determination of 4-Aminoazobenzene, §64 LFGB B 82.02-9:2006 will be performed on the sample.

4.4 pH value

According to EN1413

TEST METHOD	Test Items			Client's Requirement	P/F
	(S03)	(S04)	(S05)		
pH value Average value(nearest to 0.1)	7.2	7.3	7.4	>3.5 & <9.5	P P P

Note: P: Pass F: Fail

4.5 Dimethyl Fumarate Content:

TEST METHOD	(S02)	Client Requirement	P/F

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	Sub-sample (S02)	Client Requirement	P/F

Note: P: Pass F: Fail

- End of report -

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