

Firm: Pusha Safety Ind
3, Afshar Alley
Jam Str.
Tehran
Iran
1588663911

For the attention of: Amir E Zargari

Technical Report

Subject: Testing of gloves identified as "PushaChem" in accordance with EN 388: 2003 and EN 420: 2003 + A1: 2009

Your ref: Invoice # 2012096

Our ref: SPC0201519/1207/2

Date: 8 June, 2012

Conditions of Issue:

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Report signed by: Adam Mortiboys
Position: PPE Technologist
Department: Safety Product Centre

WORK REQUESTED

Samples of gloves, identified as "PushaChem", were received by SATRA on the 14th March 2012, for testing in accordance with EN 420: 2003 + A1: 2009 & EN 388: 2003.

CONCLUSIONS

SAMPLE REFERENCE	STANDARD	CLAUSE / PROPERTY	PASS / FAIL
PushaChem	EN 420: 2003 + A1: 2009	5.1 Length and fit	Pass
		5.2 Dexterity	Level 5
	EN 388: 2003	6.1 Abrasion resistance	Level 4
		6.2 Blade cut resistance	Level 1
		6.3 Tear resistance	Level 2 See note 3
		6.4 Puncture resistance	Level 1

TESTING

Testing was carried out in accordance with EN 420: 2003 + A1: 2009† & EN 388: 2003 between the 22nd and 23rd May 2012

Unless otherwise stated, samples were conditioned for at least 24 hours in a controlled environment maintained at $(23 \pm 2)^\circ\text{C}$ and $(50 \pm 5)\%$ relative humidity. Testing was carried out within the same environment

Figure 1 – Gloves identified as "PushaChem"



Report by: Adam Mortiboys
Pusha Safety Ind
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Signed: Adam Mortiboys
PPE Technologist
Safety Product Centre
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REQUIREMENTS

Table 1 – Levels of performance for EN 388: 2003

Performance Level	1	2	3	4	5
6.1 Abrasion resistance (cycles to failure)	100	500	2000	8000	N/A
6.2 Blade cut resistance (minimum cut resistance index)	1.2	2.5	5.0	10	20
6.3 Tear resistance (lowest peak force – newtons)	10	25	50	75	N/A
6.4 Puncture resistance (lowest peak force – newtons)	20	60	100	150	N/A

Table 2 – Requirements for EN 420: 2003 + A1: 2009† Clause 5 Size and Dexterity

Glove size	6	7	8	9	10	11
Minimum length / mm	220	230	240	250	260	270

Performance level	1	2	3	4	5
Diameter of dexterity pin /mm	11.0	9.5	8.0	6.5	5.0

TEST RESULTS

Table 3 – Testing of gloves identified as “PushaChem” in accordance with EN 420: 2003 + A1: 2009

EN 420: 2003 +A1: 2009 CLAUSE / TEST	EN 420: 2003 + A1: 2009 REQUIREMENT	TEST RESULTS		UoM (See note 1)	PASS / FAIL
5.1 Glove length	See table 2	Size 8	Length / mm L: 401 , R: 390	± 0.3 mm	Pass
5.1 Comfort and fit	See table 2	Size: 8 <i>Wearer hand size</i> Left: L:8.5, C:7.0 Right: L:9.0 , C:7.0 <i>Comments on fit:</i> Slightly long in the fingers		N/A	Pass
5.2 Dexterity	See table 2	Size 8	Minimum pin diameter 5 mm	N/A	Level 5

Table 4 – Testing of gloves identified as “PushaChem” in accordance with EN 388: 2003

EN 388: 2003 CLAUSE / TEST	EN 388: 2003 REQUIREMENT	TEST RESULTS			UoM (See note 1)	PASS / FAIL
6.1 Abrasion resistance	See table 1	Sample 1 2 3 4	Failure between / cycles >8800 >8800 >8800 >8800		± 10 % See note 2	Level 4
		<i>Saint-Gobain A700 Abrasive paper used Abrasion machine compliant with EN 388: 1994 Clause 6.1.3</i>				
6.2 Blade cut resistance	See table 1	Sample Left Mean = Right Mean =	Cut index 1.39, 1.38, 1.37, 1.51, 1.51 1.43 1.50, 1.42, 1.49, 1.41, 1.39 1.44		± 0.08	Level 1
		<i>Nominal width of blade is 0.3mm</i>				
6.3 Tear resistance	See table 1	Sample 1 2 3 4	Peak force / N 25.0 25.6 26.1 29.5		± 2.1 N See note 3	Level 2
6.4 Puncture resistance	See table 1	Sample 1 2 3 4	Peak force / N 34.7 38.4 41.7 37.3		± 2.1 N	Level 1

ADDITIONAL INFORMATION / NOTES

Note 1 – ‘UoM’ denotes estimated Uncertainty of Measurement for stated test results. This uncertainty value is based on a standard uncertainty multiplied by a coverage factor $k = 2$, which provides for a confidence level of approximately 95%

Note 2 – Estimated uncertainty of measurement applied at point of test (e.g. to applied force or to tolerance limits) to ensure product meets requirements of the standard

Note 3 – Test result(s) would meet the requirements of EN 388: 2003 clause 6.3 Tear resistance for a level 2 if uncertainty of measurement was not taken into account. However, if uncertainty (as stated in UoM column) is applied, this result may be considered to fulfil the requirements of a level 1 only.

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Issue Date: 1st October 2009