

Customer details: Allied International Trading Ltd
T/as Supertouch
Unit A1
Hubert Road
BRENTWOOD
Essex
CM14 4JE

SATRA reference: SPC0224338 /1417

Your reference:

Date of report: 23 May 2014

For the attention of: Sangeeta Aeri

Samples received: 17 April 2014

TECHNICAL REPORT

Subject: Limited testing of gloves identified as Oven Mitten in accordance with EN 388:2003, EN 420:2003 + A1:2009 and EN 407:2004.

Conditions of Issue:

This report may be forwarded to other parties provided that it is not changed in any way. It must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.

Results given in this report refer only to the samples submitted for analysis and tested by SATRA. Comments are for guidance only.

Tests marked † fall outside the UKAS Accreditation Schedule for SATRA. All interpretations of results of such tests and the comments based upon them are outside the scope of UKAS accreditation and are based on current SATRA knowledge.

A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the client as a result of information supplied in the report.

The uncertainty of the results in this report is based on a standard uncertainty multiplied by a coverage factor $k=2$, which provides for a confidence level of approximately 95%

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

Work Requested

Samples of gloves, see Table 1, were received by SATRA, for testing in accordance with EN 388:2003 Clauses 6.1 Abrasion resistance and 6.3 Tear resistance, EN 420:2003 + A1:2009 and EN 407:2004 Clause 5.2 Contact heat only.

Table 1 – Samples Received

Sample description as stated by the client	Sizes submitted for testing	Colour of samples submitted	Approximate weight of one glove
Oven Mitten	Not stated	Blue woven oven mitten	Size: Not stated Weight: 81.8g



Conclusion

Standard	Clause / Property	Result
EN 420:2003 + A1:2009	5.1 Length and fit	Pass
	5.2 Dexterity	Level 5
EN 388:2003	6.1 Abrasion resistance	Level 1
	6.3 Tear resistance	Level 1
EN 407:2004	5.2 Contact Heat	Level 1

Testing

Samples for testing were conditioned for at least 24 hours in a conditioned environment maintained at (23±2) °C and (50±5) % relative humidity. Testing was carried out within the same environment.

Samples for testing in accordance with EN 407:2004 were conditioned for at least 24 hours in a conditioned environment maintained at (23±2) °C and (50±5) % relative humidity. Testing of each sample was begun within 5 minutes of removal from this environment.

For oven mitten supplied had no sizing information given so for EN 420: 2003 + A1: 2009 Clause 5.1 Length and Fit the oven mitten was assessed by people with various hand sizes.

Requirements

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

Table 3 – Requirements for EN 388:2003

Performance Level	1	2	3	4
6.1 Abrasion resistance (cycles to failure)	100	500	2000	8000
6.3 Tear resistance (lowest peak force / N)	10	25	50	75

Table 4 – Requirements for EN 407:2004 Clause 5.2 Contact heat

Performance level	Contact Temperature / °C	Threshold Time / s
1	100	≥ 15
2	250	≥ 15
3	350	≥ 15
4	500	≥ 15

Note A – For performance levels 3 or 4 in contact heat, a performance level of at least 3 must be recorded in burning behaviour. Otherwise, a maximum performance level 2 can be claimed

Test Results

EN 420:2003 + A1:2009 Test Results

Clause / Test	Requirement	Test Results			UoM (See note B)	Result
5.1 Glove length, comfort and fit	See table 2	Size	Length /mm		± 0.3 mm	Pass
			Left	Right		
		8	395	401		
		Comments on fit: Satisfactory				
		10	395	401		
Comments on fit: Satisfactory						
5.2 Dexterity	See table 2	Size	Minimum pin diameter / mm		N/A	Level 5
		8	5.0			
		10	5.0			

EN 388:2003 Test Results

Clause / Test	Requirement	Test Results	UoM (See note B)	Level
6.1 Abrasion resistance <i>Outer material</i>		Sample Failure between / cycles		
		1 105-500		
		2 105-500		
		3 105-500		
		4 105-500		
		<i>Klingspor Abrasive paper used Abrasion machine compliant with EN 388: 1994 Clause 6.1.3</i>		
6.1 Abrasion resistance <i>Middle layer</i>		Sample Failure between / cycles	± 5 %	1
		1 <100		
		2 <100	See note C	
		3 <100		
		4 <100		
		<i>Klingspor Abrasive paper used Abrasion machine compliant with EN 388: 1994 Clause 6.1.3</i>		
6.1 Abrasion resistance <i>Lining material</i>	See table 3	Sample Failure between / cycles		
		1 <100		
		2 <100		
		3 <100		
		4 <100		
		<i>Klingspor Abrasive paper used Abrasion machine compliant with EN 388: 1994 Clause 6.1.3</i>		
6.3 Tear resistance <i>Outer material</i>		Sample Peak force / N		
		1 22.3		
		2 21.7	± 2.1 N	1
		3 15.7		
		4 14.3		
		<i>Klingspor Abrasive paper used Abrasion machine compliant with EN 388: 1994 Clause 6.1.3</i>		
6.3 Tear resistance <i>Middle layer</i>		Sample Peak force / N		
		1 4.7		
		2 6.0	± 2.1 N	1
		3 6.0		
		4 6.0		
		<i>Klingspor Abrasive paper used Abrasion machine compliant with EN 388: 1994 Clause 6.1.3</i>		
6.3 Tear resistance <i>Lining material</i>		Sample Peak force / N		
		1 15.7		
		2 16.3		
		3 23.7		
		4 22.0		

EN 407:2004 Test Results

Clause / Test	Requirement	Test Results		UoM (See note B)	Level
5.2 Contact Heat	See table 4	Contact temperature / °C	Threshold time / s	± 0.7 s	1
		100°C	34.7		
			37.3		
		Rounded mean	37.9		
			37		

Additional Information / Notes

Note B – ‘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 C – 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

TERMS AND CONDITIONS OF BUSINESS

1. **GENERAL**
Work done or services undertaken are subject to the terms and conditions detailed below and all other conditions, warranties and representations, expressed or implied are hereby excluded.
2. **PRICES**
Prices are based on current material and production costs, exchange rates, duty and freight and are subject to change without notice.
3. **DELIVERY ESTIMATES**
Delivery estimates are made in good faith and date from receipt of a written order and full information to enable us to proceed. While SATRA or its subsidiaries (hereafter referred to as "SATRA") make every effort to fulfil them, such estimates are subject to unforeseen events and if not maintained, cannot give rise to any claim. Offers "ex stock" are subject to prior sale.
4. **CANCELLATION AND RETURNS**
Cancellation of orders for goods, services, training or consultancy is only acceptable by prior agreement of SATRA and a charge will normally be made.
5. **CLAIMS**
Claims for errors, shortages etc should be notified within 10 days of date of receipt. In the event of goods damaged in transit, packing materials should be retained for examination; otherwise no liability can be accepted.
6. **PAYMENT TERMS**
Payment terms are net 21 days from date of invoice. Failure to comply with the terms of payment may result in delayed delivery of goods and services and a review of the Customer's credit account. Should the customer become subject to an administration order, or becomes bankrupt or goes into liquidation, SATRA has a right to cancel any contract and discontinue any work. SATRA reserves the right to adjust US Dollar and Euro sales price where customer exceeds credit terms and where the exchange rate has moved more than 10% since invoicing.
7. **RETENTION OF TITLE**
All goods remain the property of SATRA until paid in full. Under no circumstances will a customer's purchase order override our Retention of Title clause. In the case of software, the ownership of the software remains with SATRA. Payment of invoices in full will entitle the customer to use the software under licence until (a) they cease to be a member of SATRA or (b) they cease trading. In both instances, the licence shall then revert to SATRA.
8. **GUARANTEE**
All goods manufactured by SATRA are guaranteed both as regards material and workmanship. Any part returned carriage paid, within twelve months from date of supply and found defective, will be repaired or replaced at SATRA's option free of charge. SATRA admits no liability for loss, damage or delay consequent on any defect in any goods supplied by SATRA.
9. **TEST REPORTS**
Results given in test reports refer only to samples submitted for analysis and tested by SATRA. A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the client as a result of information supplied in a test report.
10. **TEST SAMPLES**
Unless otherwise agreed in advance, test samples will be disposed of 6 weeks after the date of the final report. If required, samples can be returned at the Customer's expense.
11. **RESPONSIBILITY**
Every effort is made to ensure accuracy in description, drawings and other information in correspondence, catalogues, etc but no warranty is given in this respect and SATRA shall not be liable for any error therein. SATRA carries out all tests and/or advises only on the basis that the same are carried out, made or given without any responsibility whether for negligence or otherwise. SATRA and its servants or agents will not be liable for any damage or loss direct or indirect of whatsoever kind, whether or not the same results directly or indirectly from negligence on the part of SATRA or its servants or agents.
12. **CONFIDENTIALITY**
Unless specifically excluded in the terms of an individual contract between SATRA and its Customer, the following shall apply to all reports, advice, drawings, photographs, specifications or data:
 - i. The above shall not be disclosed to third parties or used in litigation without the consent of SATRA.
 - ii. Where SATRA has given consent to disclosure, the Customer shall draw the attention of the third party to these terms of business and the basis on which SATRA undertakes test, reporting and advising. The Customer shall indemnify SATRA for any failure to do so.
 - iii. The above items are submitted to the Customer as confidential documents. Confidentiality shall continue to apply after completion of the business, but shall cease to apply to information or knowledge which may come into the public domain.
13. **CONSTRUCTION AND ARBITRATION**
The laws of England shall govern all contracts and the parties submit to exclusive jurisdiction of the courts of England, unless otherwise agreed.

Issue Date: 1st October 2009