

Firm: Stanbee Asia Ltd
700/273 Moo 1
Amata Nakorn Industrial Estate
Tambol Bankao
Amphur Panthong
Chonburi 20160
Thailand

Job reference: FWT0206415/1230/Z/a

Date: 8th August 2012

Samples received: 26th July 2012

Attention of: Chutipa Laoprasertsiri

Testing completed: 8th August 2012

TECHNICAL SERVICES REPORT

Subject: Evaluation of toe puff material

Sample reference: Vantage 20 1ME

Tests requested

SATRA TM 1 1992 Thickness of leather and insole materials

The samples were stored in a standard controlled environment of $20 \pm 2^\circ\text{C}/65 \pm 2\%\text{RH}$ for at least 24 hours prior to testing and testing was carried out in this atmosphere.

SATRA TM 83 2009 (2012) Measurement of the area shape retention and collapsing load of formed toe puff and stiffener materials

The samples were stored in a standard controlled environment of $20 \pm 2^\circ\text{C}/65 \pm 2\%\text{RH}$ for at least 24 hours after forming. Testing was carried out in a conditioned atmosphere of $23 \pm 2^\circ\text{C}/50 \pm 2\%\text{RH}$.

Conditions of Issue:

This report may be forwarded to other parties provided they are members of SATRA and that it is not changed in any way. It must not be given to non-members nor 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 the 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 customer as a result of information supplied in the report.

Please note uncertainty of measurement has not been applied to the results in this report. SATRA uncertainty of measurement values are available on request.

Report signed by: Kala Tidball-Wykes
Footwear Consultant
Footwear Technology - Testing
On behalf of SATRA Technology Centre Ltd

RESULTS

Reference:	Vantage 20 1ME						
Type:	Thermoplastic						
Activation conditions:	95°C for 8.5 minutes						
Test Method	Property	Result	Hardness categories and related performance levels				Category
			Very hard	Hard	Medium	Soft	
SATRA TM 1 1992	Thickness (mm)	0.46	-	-	-	-	-
SATRA TM 83 2009 (2012)	Initial collapsing load (N)	5	>130	130-81	80-31	30 or less	Soft
	Resilience ⁽¹⁾ (%)	80	Min 25	Min 30	Min 40	Min 50	Satisfactory
Properties not related to hardness			SATRA performance levels			Category	
			A	B	C		
SATRA TM 83 2009(2012)	Moisture resistance ⁽²⁾ (%)	80	Min 80	Min 65	Min 50	A	
	Dry area shape retention (%)	Initial	98	60-80 ⁽³⁾		See note 3	
		After 10 collapses	100	Min 50		Satisfactory	

- Note: 1 Resilience is percentage retention of initial collapsing load after ten collapses.
 2 Moisture resistance is percentage retention of initial dry collapsing load after 1 hour immersion.
 3 Puffs giving values above this level may lead to a conspicuous discontinuity at the back edge. This is likely to be most serious with hard puffs, light uppers and plain vamp styles. For materials, constructions and styles where there is little risk of the back edge of the puff showing this upper limit can be disregarded.

COMMENTS

This material falls into the soft category and, as such, the resilience is satisfactory. Overall, the properties not related to hardness meet our recommendations for Performance Level A for the most demanding footwear applications, however we draw your attention to note 3 above.

This material should be suitable for use as a toe puff in leisure shoes with soft uppers, indoor footwear, slippers and some sports footwear eg soccer boots.

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Signed:

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.
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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.
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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.
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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

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Signed:

