

**LABORATÓRIOS - V.N.FAMALICÃO**



COMPANY

**ARITEKS BOYACILIK TICARET VE SANAYI AS**  
**HEKIMSUYU CAD Nº 38**  
**KUCUKKOY ISTANBUL - TURKEY**  
**34250- TURKEY**

**Request Nr.: 4049/2018**

**Date of Reception : 2018/04/13**

**Observations**

**Samples reference - Your reference**

6755/2018 - ArWoWear 330 Moda Pro

**Tests required**

Tests according EN 1149-5 | Woven Fabric ref. ArWoWear 330 Moda Pro  
Composition 60% Modacrylic 38% Cotton 2% carbon | Weight 310-340 g/m<sup>2</sup>. (All results of tests, excluding the result of electrostatic properties test, were transcribed from report nr. 3739/2018-1. The pretreatment was performed on report nr. 3739/2018-1)

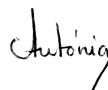
**COMMENTS**

See last page

- The tests were performed between the following dates: 2018/04/13 and 2018/04/20.

V.N.FAMALICÃO, 23th April 2018

LABORATORY  
COORDINATOR



(Engª Antónia Andrade)

**NOTES:**

- These results were obtained according to the proceedings referred in the Quality Manual of CITEVE and concern only the samples submitted to testing (above mentioned).
- Any part of this report cannot be reproduced without the prior permission of CITEVE.
- The tests signalled by \* are not included in the scope of accreditation of this laboratory
- q.l - quantification limit                      d.l. - detection limit                      n.d. - not detected
- Samples are stored for 6 months after the date of entry, except for chemical products that are stored for a month.

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<u>Sample Ref.</u>	<u>Your ref.</u>	<u>Sample description</u>
6755 /2018	ArWoWear 330 Moda Pro	1 Sample of woven fabric

**Test/Standard:** *DIMENSIONAL STABILITY TO DOMESTIC WASHING AND DRYING / EN ISO 6330:2012*

**Results**

Specimen	1	2	3
Warp (individual values %) -	-0,5	-0,3	-0,5
Weft (individual values %) -	-0,5	-0,3	-0,4
Warp (mean value %) -	-0,4		
Weft (mean value %) -	-0,4		
Uncertainty			
Warp (%) -	±0,48		
Weft (%) -	±0,46		

**Test Conditions**

Washing machine: Type A  
Washing programme (ISO 6330:2012): 4N (40°C)  
Total load (kg): 2  
Type of load used: Type III (100% polyester)  
Detergent used: Ref.3 (ECE)  
Sodium perborate+TAED  
Drying method: Drip line dry  
Number of washing and drying cycles: 5  
Number of specimens tested: 3  
Note: the signal + means extension and the signal - means shrinkage.

**Test/Standard:** *ELECTROSTATIC PROPERTIES: MEASUREMENT OF CHARGE DECAY / EN 1149-3:2004*

**Results**

CHARGE DECAY HALF TIME (t50):	
Individual values (s):	<0,01 <0,01 <0,01
Mean value (s):	<0,01
SHIELDING FACTOR (S):	
Individual values:	0,89 0,89 0,89
Mean value:	0,89
Uncertainty	±0,085

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### Test Conditions

Method used: 2 (induction charging)  
Time measurement: 30 s  
Number of specimen tested: 3  
Pre-treatment:  
Washing programme (ISO 6330:2012): 4N (40°C)  
Drying procedure: Drip line dry  
Detergent used: ECE+Sodium perborate+TAED  
Number of cycles: 5  
Atmosphere for conditioning and testing:  
(23+/-1)°C; (25+/-5)% relative humidity

**Test/Standard:** *pH OF AQUEOUS EXTRACT / ISO 3071:2005*

### Results

Mean pH-value -	6,5
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### Test Conditions

Type of solution used - KCl  
pH of the extracting solution - 5,6  
Temperature of the extracting solution - 22 °C

**Test/Standard:** *AROMATIC AMINES FROM AZO COLORANTS (without extraction) / EN ISO 14362-1:2017*

### Results

	Results in mg/kg
4-Aminobiphenyl	< 5 (q.l.)
Benzidine	< 5 (q.l.)
4-Chloro-o-toluidine	< 5 (q.l.)
2-Naphthylamine	< 5 (q.l.)
<sup>a</sup> o-Aminoazotoluene	< 5 (q.l.)
<sup>a</sup> 5-Nitro-o-toluidine	< 5 (q.l.)
4-Chloroaniline	< 5 (q.l.)
2,4-Diaminoanisole	< 5 (q.l.)
4,4'-Diaminodiphenylmethane	< 5 (q.l.)
3,3'-Dichlorobenzidine	< 5 (q.l.)
3,3'-Dimethoxybenzidine	< 5 (q.l.)
3,3'-Dimethylbenzidine	< 5 (q.l.)
4,4'-Methylene-di-o-toluidine	< 5 (q.l.)
p-Cresidine	< 5 (q.l.)
4,4'-Methylene-bis-(2-chloraniline)	< 5 (q.l.)
4,4'-Oxydianiline	< 5 (q.l.)

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4,4'-Thiodianiline	< 5 (q.l.)
o-Toluidine	< 5 (q.l.)
2,4-Diaminotoluene	< 5 (q.l.)
2,4,5-Trimethylaniline	< 5 (q.l.)
o-Anisidine	< 5 (q.l.)
2,4-Xylidine	< 5 (q.l.)
2,6-Xylidine	< 5 (q.l.)
° 4-Aminoazobenzene	< 5 (q.l.)

<sup>a</sup>These amines are reduced to o-toluidine and 2,4-Diaminotoluene.

<sup>o</sup>This amine is reduced to aniline and/or 1,4-phenylenediamine. If detected an additional test must be performed.

### Test Conditions

Procedure: 10.2

Detection method:GC-MS

Quantification method:GC-MS or LC-MS

Confirmation method:LC-DAD or LC-MS

Detection limit: 1,5 mg/kg

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### COMMENTS

The sample our ref. 6755/2018 is according EN 1149-5:2008 in electrostatic properties: measurement of charge decay (EN 1149-3:2004:  $t_{50} < 0,01s$  and  $S = 0,89$ ; requirement  $t_{50} < 4s$  or  $S > 0,2$ ), is according EN ISO 13688:2013 in dimensional stability to domestic washing and drying (after 5 cycles 4N (40°C) Drip line dry: warp -0,4% and weft -0,4%; maximum requirement  $\pm 3\%$ ), aromatic amines derived from azocolorants (requirement not detectable) and pH of aqueous extract (requirement 3,5 to 9,5).



request 4049-2018 sample 6755-2018