

# REPORT No 11405

*Date of issue: September 30, 2025*

*Status: FINAL REPORT*

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## ASTM D3939 SNAGGING RESISTANCE OF FABRICS (MACE)

### Program: SQ-1073

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Prepared by:	Reviewed by:	Approved by:
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## 1. FOREWORD

This report summarizes the results of the **SQ-1073** proficiency testing program for determination of snagging resistance of fabrics. This program is conducted in a bilateral format, following the A.3.3 classification of the ISO 17043 standard ("Split-sample testing schemes").

**South Quality** conducted the testing program in September 2025 with the aim of assessing the laboratory's ability to competently perform the designated tests.

## 2. ORGANIZATION

Program Coordinator: Lic. Esther Casas  
 Assistant Technician: Berenice Ferrel  
 Statistic: Lic. Manuel Tozaki  
 Supervision: Eng. Emiliano Medina

## 3. OBJECTIVE

The objective of this proficiency testing program is to determine the snagging resistance of fabrics, using the following standard:

Standard
ASTM D3939/D3939M-13 (2017)

To verify this, batches of fabrics have been selected.

Participants in this program have not been previously informed about the expected behavior of the samples they receive.

## 4. PARTICIPANT

Company: **EUROFINS TEXTILE TESTING SPAIN**  
 Laboratory: **EUROFINS TEXTILE TESTING SPAIN**  
 Country: Spain  
 Client ID: E536  
 Contact person: María José Gascón Álamo  
 Quality Technician  
[mariajose.gascon@cpt.eurofinseu.com](mailto:mariajose.gascon@cpt.eurofinseu.com)

## 5. HOMOGENEITY

Several batches were prepared identically by the staff at South Quality.

Subsequently, a homogeneity study was conducted with an ISO 17025 accredited laboratory.

The control process followed ISO Guide 35: 2017, clause 7.4.1.2. Stratified random sampling was employed, and samples were chosen using random number generation software.

The results of this test are presented below:

Size of each batch: **50 units**

Tested samples from each batch: **20 units**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES (600 CYCLES)		
	BATCH: LT2965	BATCH: LT2966	BATCH: LT2967
LENGHTWISE AVG	YES	NO	YES
CROSSWISE AVG	YES	YES	YES
CHANGE IN APPEARANCE LENGHTWISE	YES	NO	YES
CHANGE IN APPEARANCE CROSSWISE	YES	YES	YES

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES (600 CYCLES)		
	BATCH: LT3216	BATCH: LT2317	BATCH: LT3218
LENGHTWISE AVG	YES	YES	YES
CROSSWISE AVG	YES	NO	YES
CHANGE IN APPEARANCE LENGHTWISE	NO	YES	YES
CHANGE IN APPEARANCE CROSSWISE	NO	NO	YES

The samples for this program are taken from the selected batches identified as **LT2965**, and **LT3218**.

For the indicated batches, the values determined in the homogeneity study are utilized as the assigned values.

The analysis of the test data indicated that the selected samples exhibited sufficient homogeneity for the program. Therefore, the results of participants identified as outliers cannot be attributed to sample variability.

## 6. SAMPLE INFORMATION

The following samples were sent for testing:

Batch:	LT2965
Sample ID:	08
Characteristics:	Black fabric - 40 x 40 cm - 5 units

Batch:	LT3218
Sample ID:	13
Characteristics:	Beige fabric - 40 x 40 cm - 5 units

## 7. IMAGES



## 8. ASSIGNED VALUES

BATCH: LT2965	
DETERMINATION	RESULTS
LENGHTWISE AVG	2-3
CROSSWISE AVG	1-2
CHANGE IN APPEARANCE LENGHTWISE	No changes
CHANGE IN APPEARANCE CROSSWISE	No changes

BATCH: LT3218	
DETERMINATION	RESULTS
LENGHTWISE AVG	4-5
CROSSWISE AVG	4
CHANGE IN APPEARANCE LENGHTWISE	No changes
CHANGE IN APPEARANCE CROSSWISE	No changes

## 9. PARTICIPANT RESULTS (SEE APPENDICES B AND C)

CODE: LT2965-13	
DETERMINATION	RESULTS
LENGHTWISE AVG	2-3
CROSSWISE AVG	1-2
CHANGE IN APPEARANCE LENGHTWISE	No changes
CHANGE IN APPEARANCE CROSSWISE	No changes

CODE: LT3218-08	
DETERMINATION	RESULTS
LENGHTWISE AVG	4-5
CROSSWISE AVG	4
CHANGE IN APPEARANCE LENGHTWISE	No changes
CHANGE IN APPEARANCE CROSSWISE	No changes

## 10. STATISTICS

The results must be treated as qualitative.

For qualitative results, the comparison will be made directly against the assigned values, so any difference will be evaluated as **Unsatisfactory**.

## 11. EVALUATION OF PERFORMANCE

BATCH	DIRECTION	SNAGGING RESISTANCE (SCALE - AVG)		PERFORMANCE RESULT
		PARTICIPANT RESULT	ASSIGNED RESULT	
LT2965	LENGHTWISE	2-3	2-3	SATISFACTORY
	CROSSWISE	1-2	1-2	SATISFACTORY
LT3218	LENGHTWISE	4-5	4-5	SATISFACTORY
	CROSSWISE	4	4	SATISFACTORY

BATCH	DIRECTION	SNAGGING RESISTANCE (CHANGE IN APPEARANCE)		PERFORMANCE RESULT
		PARTICIPANT RESULT	ASSIGNED RESULT	
LT2965	LENGHTWISE	No changes	No changes	SATISFACTORY
	CROSSWISE	No changes	No changes	SATISFACTORY
LT3218	LENGHTWISE	No changes	No changes	SATISFACTORY
	CROSSWISE	No changes	No changes	SATISFACTORY

## 12. CONCLUSIONS

The overall performance of this **SQ-1073** program from the participant laboratory **EUROFINS TEXTILE TESTING SPAIN**, is **SUFFICIENT** based on expected results.

The criteria used for the evaluation of the overall performance is the following:

- **SUFFICIENT** performance: No unsatisfactory results were obtained.
- **INSUFFICIENT** performance: An unsatisfactory result was obtained.

# APPENDIX A

## INSTRUCTIONS



# INSTRUCTIONS

<b>PROGRAM:</b>	Snagging resistance of fabrics (Mace)
<b>CODE:</b>	SQ-1073
<b>VERSION:</b>	-
<b>STANDARD:</b>	ASTM D3939
<b>COORDINATOR:</b>	Lic. Esther Casas ( <a href="mailto:ecasas@ptsouthquality.com">ecasas@ptsouthquality.com</a> )

### 1 - General

This document serves as a guide for managing the results of the **SQ-1073** program.

### 2 - Standard

#### **ASTM D3939/D3939M-13 (2017)**

### 3 - Tests involved

TEST
Determination of snagging resistance of fabrics

### 4 - Samples

CODE	SAMPLE	QUANTITY
LT2965-13	Black fabric - 40 x 40 cm	5
LT3218-08	Beige fabric - 40 x 40 cm	5

### 5 - Notes

- a) Being a bilateral program, there is no deadline for submitting results.
- b) The participant must submit the results using the usual report employed by their laboratory.
- c) The samples must be tested in the condition they are delivered, without dry cleaning or laundering.
- d) The samples are marked with an X to show which side must be exposed to the maze.
- e) Samples must be retained until the end of the program, which concludes with the submission of the final report.
- f) To review the results, test images would be appreciated. Images can be attached at the end of this document or sent by email.

**PHOTOGRAPHS**

# APPENDIX B

## PARTICIPANT RESULTS (TR # AR-25-YL-010375-01)

	<b>Softlines &amp; Hardlines</b>	Page 1 of 7
		<b>Analytical Report Nr.</b> AR-25-YL-010375-01 <b>Date</b> 19-Sep-2025
<b>ANALYTICAL REPORT</b>		
<hr/> <b>Client Information</b> <hr/>		
EUROFINS TEXTILE TESTING SPAIN, S.L.U. C/Germán Bernácer 4, 03203 Elche Alicante (SPAIN)		
For the attention of Luis Miralles Esteve		
<hr/> <b>Order Information</b> <hr/>		
<b>Order Code:</b>	EFYL25090123	
<b>Reception Date:</b>	10-Sep-2025	
<b>Analysis Starting Date:</b>	10-Sep-2025	
<b>Analysis Ending Date:</b>	19-Sep-2025	
<b>Overall Conclusion:</b>	Not Applicable	
<b>Decision Rule:</b>	Not applicable.	
<b>Sample(s) description</b>	Fabric	
<hr/> <b>Additional information of the order<sup>(2)</sup></b> <hr/>		
<hr/> <b>Eurofins Textile Testing Spain, S.L.U.</b> Calle Germán Bernácer, 4 03203 Elche SPAIN <b>Phone</b> +34966299638 <b>www.eurofins.com/tex</b>		

## Sample Information

ID	Sample Code	Client Reference <sup>(2)</sup>	Additional Information <sup>(2)</sup>
A	560-2509-00505	SQ-1073 Batch:LT 2965 ID:13	

## SAMPLE PICTURE



**Eurofins Textile Testing Spain, S.L.U.**  
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 03203 Elche  
 SPAIN  
**Phone** +34966299638  
[www.eurofins.com/tex](http://www.eurofins.com/tex)

**CONCLUSION:**

TEST PROPERTY	PASS	FAIL	REMARKS
◆ Snagging Resistance of Fabrics (Mace) ASTM 3939			
A			Not applicable

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 Calle Germán Bernácer, 4  
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 SPAIN  
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[www.eurofins.com/tex](http://www.eurofins.com/tex)

**RESULTS**

 ♦ Snagging Resistance of Fabrics (Mace)  
 ASTM 3939

ID	A	Requirements:	No requirements	
Parameter		RESULTS		GUIDELINES
	Pre-treatment		No	-
	N° of cycles		600	-
	Ironing		No	-
	Number of specimens tested by direction		2	-
	Lengthwise average		2-3	-
	Crosswise average		1-2	-
	Change in appearance lengthwise		no changes	-
	Change in appearance crosswise		no changes	-
<b>Remarks:</b>		Evaluation using visual classification standards and light cabin.		
			<b>Analysis Ending Date:</b> 19/09/2025	

**Longitudinal direction**



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**Phone** +34966299638  
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**Transverse direction**



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**Phone** +34966299638  
[www.eurofins.com/tex](http://www.eurofins.com/tex)

**Signed for and on behalf of Eurofins Textile Testing Spain:**  
Report electronically validated by



Axel Ferrando  
Physical-Mechanical Lab Manager

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#### EXPLANATORY NOTE

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- ◆ Test performed by Eurofins Textile Testing Spain S.L.U.
- Test is subcontracted within Eurofins group and is accredited
- Test is subcontracted within Eurofins group and is not accredited
- Test is subcontracted outside Eurofins group and is accredited
- Test is subcontracted outside Eurofins group and is not accredited

**N/A = Not Applicable**

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Test uncertainties not reported are at customer disposal, for those tests in which it is possible to evaluate the test uncertainty.  
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , which for a normal distribution provides a level of confidence of approximately 95%.  
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**End Of Report**

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# APPENDIX C

## PARTICIPANT RESULTS (TR # AR-25-YL-010373-01)



Softlines &  
Hardlines

Page 1 of 7

Analytical Report Nr. AR-25-YL-010373-01  
Date 19-Sep-2025

### ANALYTICAL REPORT

#### Client Information

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EUROFINS TEXTILE TESTING SPAIN, S.L.U.  
C/Germán Bernácer 4, 03203 Elche  
Alicante (SPAIN)

For the attention of Luis Miralles Esteve

#### Order Information

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<b>Order Code:</b>	EFYL25090123
<b>Reception Date:</b>	10-Sep-2025
<b>Analysis Starting Date:</b>	10-Sep-2025
<b>Analysis Ending Date:</b>	19-Sep-2025
<b>Overall Conclusion:</b>	Not Applicable
<b>Decision Rule:</b>	Not applicable.
<b>Sample(s) description</b>	Fabric

#### Additional information of the order<sup>(2)</sup>

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SPAIN  
**Phone** +34966299638  
**www.eurofins.com/tex**

**Sample Information**

ID	Sample Code	Client Reference <sup>(2)</sup>	Additional Information <sup>(2)</sup>
A	560-2509-00504	SQ-1073 Batch:LT3218 ID:08	

**SAMPLE PICTURE**


**Eurofins Textile Testing Spain, S.L.U.**  
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**CONCLUSION:**

TEST PROPERTY	PASS	FAIL	REMARKS
◆ Snagging Resistance of Fabrics (Mace) ASTM 3939			
A			Not applicable

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**RESULTS**

 ♦ Snagging Resistance of Fabrics (Mace)  
 ASTM 3939

ID	A	Requirements:	No requirements
Parameter		RESULTS	GUIDELINES
	Pre-treatment	No	-
	N° of cycles	600	-
	Ironing	No	-
	Number of specimens tested by direction	2	-
	Lengthwise average	4-5	-
	Crosswise average	4	-
	Change in appearance lengthwise	no changes	-
	Change in appearance crosswise	no changes	-
<b>Remarks:</b> Evaluation using visual classification standards and light cabin.			
			<b>Analysis Ending Date:</b> 19/09/2025

**Longitudinal direction**



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Transverse direction



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**Signed for and on behalf of Eurofins Textile Testing Spain:**  
Report electronically validated by



Axel Ferrando  
Physical-Mechanical Lab Manager

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#### EXPLANATORY NOTE

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- ◆ Test performed by Eurofins Textile Testing Spain S.L.U.
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  - Test is subcontracted outside Eurofins group and is not accredited
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