

REPORT No 11983

Date of issue: August 4, 2026

Status: FINAL REPORT

ISO 3795

DETERMINATION OF BURNING BEHAVIOUR OF INTERIOR MATERIALS

Program: SQO-PL13 (Round 11)

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1. FOREWORD

This report summarizes the results of the **SQO-PL13 (Round 11)** proficiency testing program on the determination of horizontal burning of interior materials. This program is carried out under a simultaneous participation format, as described in clause A.2.2 of ISO/IEC 17043: 2023 (Types of PT schemes).

South Quality conducted the testing program in June/July 2026. The aim of the program was to assess laboratory ability to competently perform the nominated tests.

2. ORGANIZATION

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

3. OBJECTIVE

The objective of this proficiency testing program is to determine the burning rates of materials. This parameter is verified using the following standard:

Standard
ISO 3795: 1989

For the verification of this, thermoplastic samples have been selected.

Participants in this program have not been previously informed of the values or range of values expected from the samples they receive.

4. PARTICIPANTS

In the present round, 21 laboratories have participated with the following details:

CODE	Country	ISO 17025 Accredited	Results delivered
01	Portugal	Yes	Yes
02	Brazil	No	Yes
03	Mexico	Yes	Yes
04	Peru	Yes	No
05	Brazil	Yes	Yes
06	Türkiye	Yes	Yes
07	Malaysia	Yes	Yes
08	Germany	Yes	Yes
09	Argentina	No	Yes
10	Mexico	Yes	Yes
11	Spain	Yes	Yes
12	Thailand	Yes	Yes
13	South Africa	Yes	Yes
14	Netherlands	Yes	Yes
15	France	Yes	Yes
16	Spain	Yes	Yes
17	Pakistan	No	No
18	Germany	Yes	Yes
19	United Kingdom	Yes	Yes
20	Italy	Yes	Yes
21	Hong Kong	Yes	No

5. HOMOGENEITY

Several batches were prepared by South Quality personnel in an identical way.

Then, a homogeneity study was carried out with an ISO 17025 accredited laboratory.

The control process followed ISO 33405: 2024, clauses 7.4.1.1 / 7.4.1.2. Stratified random sampling was applied, and the samples were selected using random-number-generation software.

The results of this test are presented below:

Size of each batch: **50 samples**

Tested samples from each batch: **15 samples**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LP3589	BATCH: LP3590	BATCH: LP3591
BURNING RATE	YES	YES	YES

Size of each batch: **50 samples**

Tested samples from each batch: **15 samples**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LP3769	BATCH: LP3770	BATCH: LP3771
BURNING RATE	YES	YES	NO

Samples for this program are taken from selected batches identified as **LP3589**, and **LP3770**.

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 (Participant **Code 12**):

Batch:	LP3589
Sample ID:	12
Characteristics:	Black thermoplastic - 360 x 110 x 0.9 mm - 5 units

Batch:	LP3770
Sample ID:	12
Characteristics:	Grey thermoplastic - 360 x 110 x 1 mm - 5 units

7. IMAGES



8. ASSIGNED VALUES

The assigned values are obtained from the results reported by all participants (**Consensus values**).

9. PARTICIPANTS' RESULTS

LABORATORY CODE	BURNING RATE - AVG (mm/s)	
	BATCH: LP3589	BATCH: LP3770
01	2.21	2.85
02	2.56	2.85
03	2.29	1.95
05	2.62	4.56
06	2.42	2.70
07	1.77	2.59
08	2.11	2.17
09	2.17	2.12
10	1.92	3.65
11	1.99	3.17
12	1.87	2.51
13	1.32	1.60
14	1.93	3.09
15	2.38	2.52
16	1.63	2.70
18	2.12	2.49
19	2.22	2.35
20	1.88	2.60

ASSIGNED VALUES - BURNING RATE (mm/s)			
LP3589		LP3770	
AVG	SD	AVG	SD
2.08	0.33	2.58	0.48

10. STATISTICS

The results must be treated as quantitative.

According to B.3.1.3 of ISO 17043 the appropriate technique is to compare participant results with the assigned values. The results can be compared using **z score**.

$$z = \frac{x - X}{\hat{\sigma}}$$

x is the participant's result

X is the assigned value

$\hat{\sigma}$ is the standard deviation

The performance evaluation of each sample is carried out with the following criteria:

$|z| \leq 2.0$ indicates “satisfactory” performance and generates no signal;

$2.0 < |z| < 3.0$ indicates “questionable” performance and generates a warning signal;

$|z| \geq 3.0$ indicates “unsatisfactory” performance and generates an action signal;

11. EVALUATION OF PERFORMANCE

LABORATORY CODE	<i>z score</i>	
	BATCH: LP3589	BATCH: LP3770
01	0.39	0.56
02	1.45	0.56
03	0.64	1.31
05	1.64	4.13
06	1.03	0.25
07	0.94	0.02
08	0.09	0.85
09	0.27	0.96
10	0.48	2.23
11	0.27	1.23
12	0.64	0.15
13	2.30	2.04
14	0.45	1.06
15	0.91	0.13
16	1.36	0.25
18	0.12	0.19
19	0.42	0.48
20	0.61	0.04

Laboratory Code 01: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 02: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 03: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 04: The laboratory has not sent the results before the deadline.

Laboratory Code 05: The laboratory obtained a **UNSATISFACTORY** result for the **LP3770** samples. Additionally, a **SATISFACTORY** result was obtained for **LP3589** samples.

Laboratory Code 06: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 07: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 08: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 09: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 10: The laboratory obtained a **QUESTIONABLE** result for the **LP3770** samples. Additionally, a **SATISFACTORY** result was obtained for **LP3589** samples.

Laboratory Code 11: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 12: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 13: The laboratory obtained **QUESTIONABLE** results for both samples.

Laboratory Code 14: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 15: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 16: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 17: The laboratory has not sent the results before the deadline.

Laboratory Code 18: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 19: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 20: The laboratory obtained **SATISFACTORY** results for both samples.

Laboratory Code 21: The laboratory has not sent the results before the deadline.

GLOBAL PERFORMANCE - SUM OF ABSOLUTE Z SCORE

POSITION	LABORATORY CODE	Z SCORE
1 st	18	0.31
2 nd	20	0.65
3 rd	12	0.79
4 th	19	0.90
5 th	08	0.94
6 th	01	0.95
7 th	07	0.96
8 th	15	1.04
9 th	09	1.23
10 th	06	1.28
11 th	11	1.50
12 th	14	1.51
13 th	16	1.61
14 th	03	1.95
15 th	02	2.01
16 th	10	2.71
17 th	13	4.34
18 th	05	5.77

12. CONCLUSIONS

The overall performance in the **SQO-PL13 (Round 11)** program, based on expected results from the participating laboratories, was as follows:

- Laboratories Codes **01, 02, 03, 06, 07, 08, 09, 11, 12, 14, 15, 16, 18, 19**, and **20** have obtained a **SUFFICIENT** performance according to the expected results and should not take action;
- Laboratory Code **10** has obtained an **ALMOST SUFFICIENT** performance according to the expected results and must evaluate if it is necessary to take corrective action.
- Laboratories Codes **05** and **13** have obtained an **INSUFFICIENT** performance in accordance with the expected results and must take corrective action.

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

- **SUFFICIENT** performance: No unsatisfactory/questionable results obtained.
- **ALMOST SUFFICIENT** performance: No unsatisfactory results were obtained, but one questionable result was found.
- **INSUFFICIENT** performance: An unsatisfactory result or two questionable results were obtained.

APPENDIX A

A1 - PARTICIPANT DATA

Company: TÜV SÜD (THAILAND) LIMITED
Laboratory: TÜV SÜD (THAILAND) LIMITED - AMATA CITY CHONBURI BRANCH
Country: Thailand
Client ID: S357
Contact person: Watcharin Khamsiri
(watcharin.k@tuvsud.com)

A2 - PARTICIPANT RESULTS

 **SOUTH
QUALITY**
PROFICIENCY TESTING PROVIDER

INSTRUCTIONS & RESULTS FORM

PROGRAM:	Determination of burning behaviour of interior materials
CODE:	SQO-PL13
ROUND:	11
STANDARD:	ISO 3795
COORDINATOR:	Lic. Esther Casas (ecasas@ptsouthquality.com)

DSQ-012 - REV 06 - SQO-PL13 R11 May 2026 1 de 6

1 - General

This document is intended to be filled with the results of the **SQO-PL13 (Round 11)** program.

Results must be typed, not handwritten.

2 - Standard

ISO 3795: 1989

3 - Participant

TÜV SÜD (THAILAND) LIMITED TÜV SÜD (THAILAND) LIMITED - AMATA CITY CHONBURI BRANCH	CODE 12
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4 - Tests involved

TEST
Determination of the horizontal burning rate of materials

5 - Samples

CODE	SAMPLE	QUANTITY
LP3589-12	Black thermoplastic - 360 x 110 x 0.9 mm	5
LP3770-12	Grey thermoplastic - 360 x 110 x 1 mm	5

6 - Notes

- The deadline for the delivery of results is **July 3, 2026**.
- The tables in this document may be modified by the participant, if desired, to include data or observations.
- The samples must be kept until the end of the program, which concludes with the submission of the final report.
- The samples are to be handled as routine lab samples, with all testing, documentation, and reporting adhering to **ISO 3795**.
- To review the results, the submission of images of the tests is appreciated. These images can be attached at the end of this document or sent via email.
- Upon completion of this document, please convert it to a PDF file and send it to the program coordinator.

7 - Test results

Test date:	15 - 19 Jun 2026
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CONDITIONING		TESTING ENVIROMENT	
Temperature (°C):	23	Max. temperature (°C):	25.9
Relative humidity (%):	50	Min. temperature (°C):	22.6
Time (h):	72	Max. relative humidity (%):	52.0
		Min. relative humidity (%):	46.2

SAMPLE		Burnt distance (mm)	Burning time (s)	Burning rate (mm/s)	Observations
LP3589-12	I	254	138	110.43	
	II	254	134	113.73	
	III	254	135	112.89	
	IV	254	133	114.59	
	V	254	138	110.43	

SAMPLE		Burnt distance (mm)	Burning time (s)	Burning rate (mm/s)	Observations
LP3770-12	I	254	102	149.41	
	II	254	102	149.41	
	III	254	100	152.40	
	IV	254	101	150.89	
	V	254	100	152.40	

OBSERVATIONS					

PHOTOGRAPHS

Picture of sample code LP3589-12 (black color)



Sample no. 1 – Before test



Sample no. 1 – After test



Sample no. 2 – Before test



Sample no. 2 – After test



Sample no. 3 – Before test



Sample no. 3 – After test



Sample no. 4 – Before test



Sample no. 4 – After test



Sample no. 5 – Before test



Sample no. 5 – After test

PHOTOGRAPHS

Picture of sample code LP3770-12 (Grey color)



Sample no. 1 – Before test



Sample no. 1 – After test



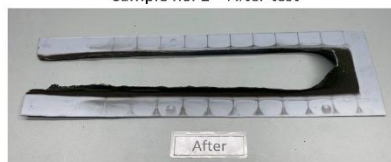
Sample no. 2 – Before test



Sample no. 2 – After test



Sample no. 3 – Before test



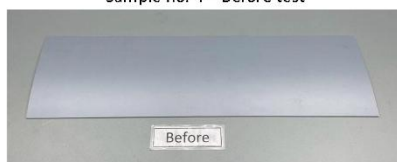
Sample no. 3 – After test



Sample no. 4 – Before test



Sample no. 4 – After test



Sample no. 5 – Before test



Sample no. 5 – After test

PHOTOGRAPHS

TEST SETUP & CONFIGURATION



Setup test – Flammability test

APPENDIX B

VOID

----- END OF REPORT -----