

# REPORT No 11288

*Date of issue: August 8, 2025*

**Status: FINAL REPORT**

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## ISO 3795

# DETERMINATION OF BURNING BEHAVIOUR OF INTERIOR MATERIALS

## Program: SQO-PL3 Round 10

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|  |  |   |
|--|--|---|
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## 1. FOREWORD

This report summarizes the results of the **SQO-PL13 Round 10** proficiency testing program on the determination of horizontal burning of interior materials. This program is carried out under a simultaneous participation format, according to the A.3.1 classification of the ISO 17043 standard (“Model 2 - Figure A.1”).

**South Quality** conducted the testing program in June/July 2025. 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  
 Statistic: 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, 20 laboratories have participated with the following details:

| CODE | Country      | ISO 17025 Accredited | Results delivered |
|------|--------------|----------------------|-------------------|
| 01   | Colombia     | Yes                  | Yes               |
| 02   | South Africa | Yes                  | Yes               |
| 03   | Chile        | No                   | Yes               |
| 04   | Hong Kong    | Yes                  | Yes               |
| 05   | Canada       | Yes                  | Yes               |
| 06   | Malaysia     | Yes                  | Yes               |
| 07   | Netherlands  | Yes                  | Yes               |
| 08   | Mexico       | Yes                  | No                |
| 09   | Australia    | Yes                  | Yes               |
| 10   | Germany      | Yes                  | Yes               |
| 11   | France       | No                   | Yes               |
| 12   | Peru         | No                   | Yes               |
| 13   | Spain        | Yes                  | Yes               |
| 14   | Italy        | Yes                  | Yes               |
| 15   | Brazil       | Yes                  | Yes               |
| 16   | France       | Yes                  | Yes               |
| 17   | Spain        | Yes                  | Yes               |
| 18   | Portugal     | Yes                  | Yes               |
| 19   | Türkiye      | Yes                  | Yes               |
| 20   | Brazil       | Yes                  | Yes               |

## 5. HOMOGENEITY

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

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

Control was carried out according to ISO Guide 35: 2017, clause 7.4.1.2. Stratified random sampling was applied. Samples were selected using random number generation software.

The results of this test appear below:

Size of each batch: **50 samples**

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

| DETERMINATION | HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES |               |               |
|---------------|--|---------------|---------------|
|               | BATCH: LP2407                                  | BATCH: LP2408 | BATCH: LP2409 |
| 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: LP2674                                  | BATCH: LP2675 | BATCH: LP2676 |
| BURNING RATE  | NO   | YES           | YES           |

Samples for this program are taken from selected batches identified as LP2408, and LP2675.

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 20**):

|                  |  |
|------------------|--|
| Batch:           | LP2408   |
| Sample ID:       | 20   |
| Characteristics: | Black thermoplastic - 360 x 110 x 0.9 mm - 5 units |

|                  |   |
|------------------|---|
| Batch:           | L2675   |
| Sample ID:       | 20  |
| Characteristics: | Grey thermoplastic - 360 x 110 x 0.9 mm - 5 units |

## 7. IMAGES



## 8. ASSIGNED VALUES

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

## 9. PARTICIPANT RESULTS

| LABORATORY CODE | BURNING RATE - AVG (mm/s) |               |
|-----------------|---------------------------|---------------|
|                 | BATCH: LP2408             | BATCH: LP2675 |
| 01              | 0.65                      | 0.95          |
| 02              | 2.76                      | 2.08          |
| 03              | 1.49                      | 1.67          |
| 04              | 2.32                      | 2.01          |
| 05              | 2.05                      | 1.99          |
| 06              | 2.10                      | 2.25          |
| 07              | 1.57                      | 1.70          |
| 09              | 1.60                      | 1.49          |
| 10              | 2.10                      | 1.88          |
| 11              | 2.20                      | 1.96          |
| 12              | 2.45                      | 2.86          |
| 13              | 1.33                      | 1.24          |
| 14              | 3.30                      | 2.90          |
| 15              | 1.82                      | 1.47          |
| 16              | 2.17                      | 1.80          |
| 17              | 2.53                      | 1.83          |
| 18              | 1.16                      | 1.08          |
| 19              | 2.45                      | 1.67          |
| 20              | 1.24                      | 1.09          |

| ASSIGNED VALUES - BURNING RATE (mm/s) |      |         |      |
|---------------------------------------|------|---------|------|
| LEM2419                               |      | LEM3225 |      |
| AVG                                   | SD   | AVG     | SD   |
| 1.96                                  | 0.64 | 1.79    | 0.53 |

## 10. STATISTICS

The results must be treated as quantitative.

According B.3.1.3 of ISO 17043 the appropriate technique is to compare participant results with the assigned values. The results can be compare 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 | z score       |               |
|-----------------|---------------|---------------|
|                 | BATCH: LP2408 | BATCH: LP2675 |
| 01              | 2.05          | 1.58          |
| 02              | 1.25          | 0.55          |
| 03              | 0.73          | 0.23          |
| 04              | 0.56          | 0.42          |
| 05              | 0.14          | 0.38          |
| 06              | 0.22          | 0.87          |
| 07              | 0.61          | 0.17          |
| 09              | 0.56          | 0.57          |
| 10              | 0.22          | 0.17          |
| 11              | 0.38          | 0.32          |
| 12              | 0.77          | 2.02          |
| 13              | 0.98          | 1.04          |
| 14              | 2.09          | 2.09          |
| 15              | 0.22          | 0.60          |
| 16              | 0.33          | 0.02          |
| 17              | 0.89          | 0.08          |
| 18              | 1.25          | 1.34          |
| 19              | 0.77          | 0.23          |
| 20              | 1.13          | 1.32          |

Laboratory Code 01: The laboratory obtained a **QUESTIONABLE** result for the LP2408 samples. Additionally, **SATISFACTORY** results were obtained for LP2675 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 obtained **SATISFACTORY** results for both samples.

Laboratory Code 05: The laboratory obtained **SATISFACTORY** results for both samples.

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

Laboratory Code 07: The laboratory has not sent the results before the deadline.

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 **SATISFACTORY** results for both samples.

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

Laboratory Code 12: The laboratory obtained a **QUESTIONABLE** result for the LP2675 samples. Additionally, **SATISFACTORY** results were obtained for LP2408 samples.

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

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

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.

**GLOBAL PERFORMANCE - SUM OF ABSOLUTE Z SCORE**

| POSITION         | LABORATORY CODE | Z SCORE |
|------------------|-----------------|---------|
| 1 <sup>st</sup>  | 16              | 0.35    |
| 2 <sup>nd</sup>  | 10              | 0.39    |
| 3 <sup>rd</sup>  | 05              | 0.52    |
| 4 <sup>th</sup>  | 11              | 0.70    |
| 5 <sup>th</sup>  | 07              | 0.78    |
| 6 <sup>th</sup>  | 15              | 0.82    |
| 7 <sup>th</sup>  | 03              | 0.96    |
| 8 <sup>th</sup>  | 17              | 0.97    |
| 9 <sup>th</sup>  | 04              | 0.98    |
| 10 <sup>th</sup> | 19              | 1.00    |
| 11 <sup>th</sup> | 06              | 1.09    |
| 12 <sup>th</sup> | 09              | 1.13    |
| 13 <sup>th</sup> | 02              | 1.80    |
| 14 <sup>th</sup> | 13              | 2.02    |
| 15 <sup>th</sup> | 20              | 2.45    |
| 16 <sup>th</sup> | 18              | 2.59    |
| 17 <sup>th</sup> | 12              | 2.79    |
| 18 <sup>th</sup> | 01              | 3.63    |
| 19 <sup>th</sup> | 14              | 4.18    |

## 12. CONCLUSIONS

The overall performance on this **SQO-PL13 Round 10** program from the participating laboratories, based on expected results, are the following:

- Laboratories Codes **02, 03, 04, 05, 06, 07, 09, 10, 11, 13, 15, 16, 17, 18, 19** and **20** have obtained a **SUFFICIENT** performance according to the expected results and should not take action;
- Laboratories Codes **01**, and **12** have obtained an **ALMOST SUFFICIENT** performance according to the expected results and must evaluate if it is necessary to take corrective action.
- Laboratory Code **14** has 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 is the following:

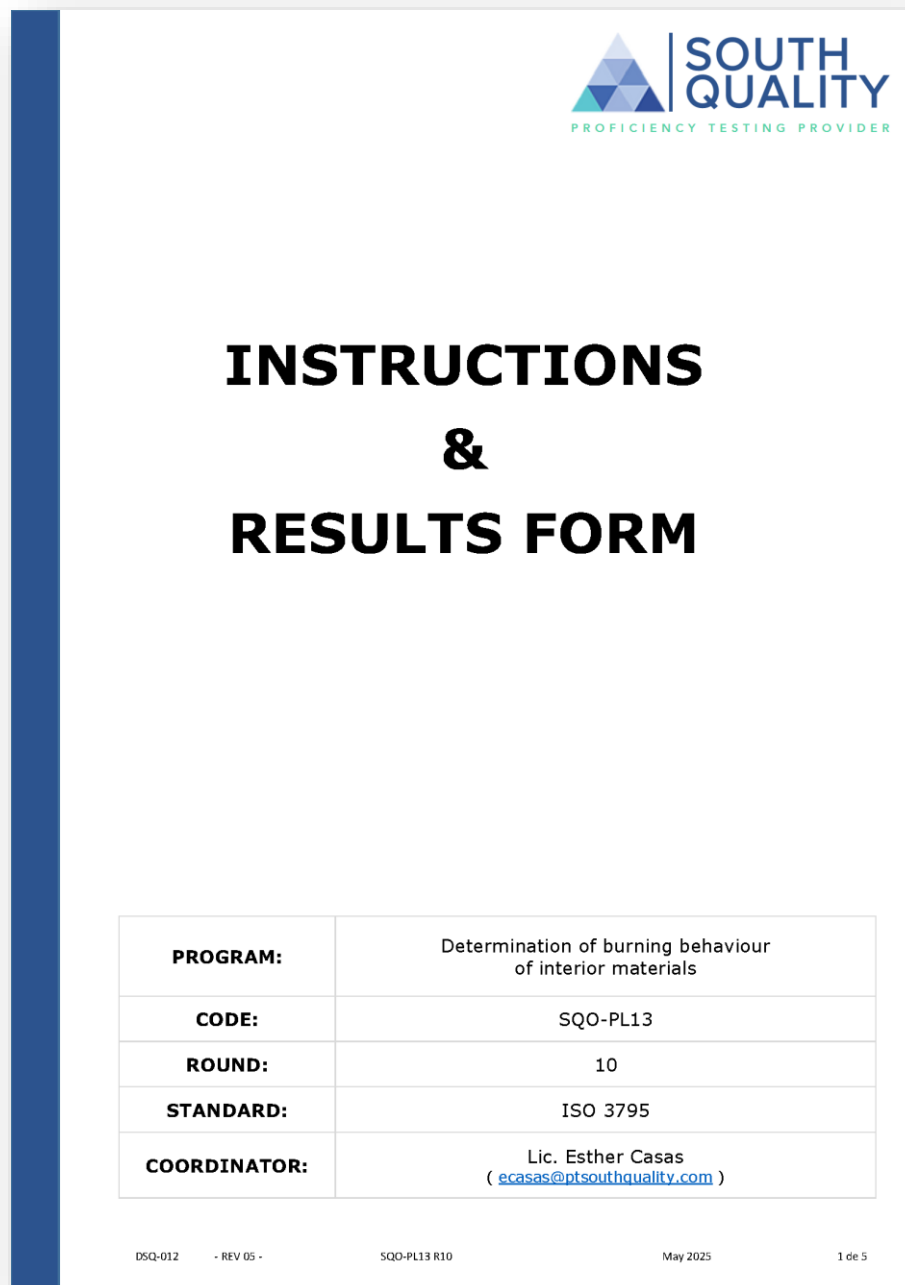
- **SUFFICIENT** performance: No unsatisfactory/questionable results obtained.
- **ALMOST SUFFICIENT** performance: No unsatisfactory results were obtained, but one questionable result was found.
- **INSUFFICIENT** performance: An unsatisfactory result or two questionable results were obtained.


## APPENDIX A

### A1 - PARTICIPANT DATA

Company: **Newtech Assessoria, Consultoria e Prestação de Serviços S/S Ltda.**  
Country: Brazil  
Client ID: C110  
Contact person: Camila Nascimento - Laboratory Analyst  
( [camila@labnewtech.com.br](mailto:camila@labnewtech.com.br) )

### A2 - PARTICIPANT RESULTS



 **SOUTH  
QUALITY**  
PROFICIENCY TESTING PROVIDER

# INSTRUCTIONS & RESULTS FORM

|                     |   |
|---------------------|---|
| <b>PROGRAM:</b>     | Determination of burning behaviour of interior materials  |
| <b>CODE:</b>        | SQO-PL13  |
| <b>ROUND:</b>       | 10  |
| <b>STANDARD:</b>    | ISO 3795  |
| <b>COORDINATOR:</b> | Lic. Esther Casas<br>( <a href="mailto:ecasas@ptsouthquality.com">ecasas@ptsouthquality.com</a> ) |

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### 1 - General

This document is intended to be filled with the results of the **SQO-PL13** program, round 10.

Results must be typed, not handwritten.

### 2 - Standard

**ISO 3795: 1989**

### 3 - Participant

|   |         |
|---|---------|
| Newtech Assessoria, Consultoria e Prestação de Serviços S/S Ltda. | CODE 20 |
|---|---------|

### 4 - Tests involved

| TEST   |
|--|
| Determination the horizontal burning rate of materials |

### 5 - Samples

| CODE      | SAMPLE                                   | QUANTITY |
|-----------|--|----------|
| LP2408-XX | Black thermoplastic - 360 x 110 x 0.9 mm | 5        |
| LP2675-XX | Grey thermoplastic - 360 x 110 x 1 mm    | 5        |

### 6 - Notes

- a) The deadline for the delivery of results is **July 9, 2025**.
- b) The tables in this document may be modified by the participant, if desired, to include data or observations.
- c) The samples must be oriented such that the outer surface of the material's curvature is positioned upward.
- d) The samples must be kept until the end of the program, which closes with the submission of the final report.
- e) 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.
- f) Upon completion of this document, please convert it to a PDF file and send it to the program coordinator.

## 7 - Test results

|            |              |
|------------|--------------|
| Test date: | July 1 and 3 |
|------------|--------------|

| CONDITIONING           |      | TESTING ENVIROMENT          |      |
|------------------------|------|-----------------------------|------|
| Temperature (°C):      | 23,0 | Max. temperature (°C):      | 23.5 |
| Relative humidity (%): | 50,0 | Min. temperature (°C):      | 22.9 |
| Time (h):              | 24   | Max. relative humidity (%): | 54.7 |
|                        |      | Min. relative humidity (%): | 48.1 |

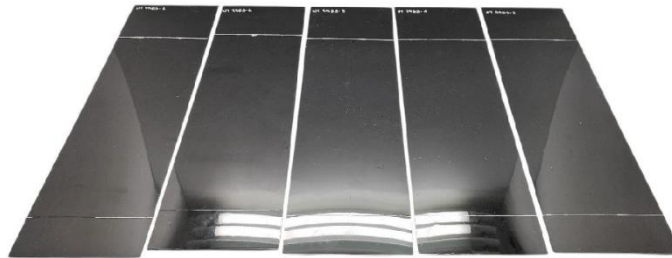
| SAMPLE    |     | Burnt distance (mm) | Burning time (s) | Burning rate (mm/s) | Observations |
|-----------|-----|---------------------|------------------|---------------------|--------------|
| LP2408-20 | I   | 254                 | 192              | 1,32                |              |
|           | II  | 254                 | 197              | 1,29                |              |
|           | III | 254                 | 211              | 1,20                |              |
|           | IV  | 254                 | 201              | 1,26                |              |
|           | V   | 254                 | 222              | 1,14                |              |

| SAMPLE    |     | Burnt distance (mm) | Burning time (s) | Burning rate (mm/s) | Observations |
|-----------|-----|---------------------|------------------|---------------------|--------------|
| LP2675-20 | I   | 103                 | 97               | 1,06                |              |
|           | II  | 254                 | 288              | 0,88                |              |
|           | III | 254                 | 283              | 0,90                |              |
|           | IV  | 178                 | 140              | 1,27                |              |
|           | V   | 105                 | 79               | 1,33                |              |

| OBSERVATIONS  |  |
|---|--|
| <p>South Quality Identification: LP2408-20 / Newtech Identification: NT259963</p> <p>South Quality Identification: LP2675-20 / Newtech Identification: NT259962</p> |  |

**PHOTOGRAPHS**

**LP2408-20:**





# APPENDIX B

**VOID**

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