



# TEST REPORT

SUBJECT N°/REPORT: P-13-15346/4/I

COMPANY: **BTC IBÉRICA, S.A.**

ADDRESS: Pol. Ind. Centrovía c/ San Francisco N°9

50196 LA MUELA (ZARAGOZA)

TESTE MATERIAL: One plastic material

DATE OF RECEPTION: 10.09.13

DATE OF ANALYSIS: 16.09.13 to 03.10.13

N° OF PAGES

8

(INCLUDING THIS COVER SHEET)

The results of the analysis are only referred to the tested material.

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This test report is a translation of the original P-13-15346/2 in Spanish. If some conflict arises it will prevail Spanish version.



15 OCT 2013

irteera - salida  
Nº: 1252/13

  
 Iratxe Zuazola  
 Laboratory Coordinator  
 Zamudio, 16th October 2013

## MATERIAL

Specimens of a plastic material were received from **BTC IBÉRICA, S.A.** for an accelerated aging test and the evaluation of mechanical properties before and after accelerated aging.

The materials have been referred by the supplier and coded internally as:

### Your Reference

**LSZH TO BS7655, EN 50290-2-27 AND IEC 60502-1**

### Our Reference

P-13-15346-A-2



P-13-15346-A-2

## TESTS

It was requested to perform an accelerated aging test according to UL1581, and mechanical properties evaluation before and after aging according to UNE EN ISO 527-2.



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## TEST DESCRIPTION

Accelerated aging test conditions:

- Arc xenón lamp
- Black panel temperature:  $63^{\circ}\text{C} \pm 3$
- Chamber temperature:  $38^{\circ}\text{C} \pm 3$
- Rain/dry cycle: 18/102 min
- Soda borosilicate glass filter
- Spectral irradiance: 1 W/m<sup>2</sup> (420 nm)  
(Equivalent to 0,35 W/m<sup>2</sup> (340 nm))
- Humidity:  $50\% \pm 10$
- Exposure time: 300 Hours

It has been request the following test before and after aging:

- Tensile strength and modulus of elasticity according to UNE EN ISO 527-2:2012

The specimens have been sent by the supplier according to UNE EN 60811-1-1 and conditioned according to UNE EN ISO 291:2008.

## RESULTS

The average results obtained are:

**Sample: LSZH TO BS7655, EN 50290-2-27 AND IEC 60502-1 (P-13-15346-A-2)**

Test	Average
Tensile strength (MPa) Before aging	11,8
Elongation (%) Before aging	190
Tensile strength (MPa) After aging	11,4
Elongation (%) After aging	170

Note: The relation between tensile strength and ultimate elongation values after and before exposure to xenon arc during 300 hours is bigger than 0,85.



P-13-15346-A-2 after 300 H aging



Tensile test



Raquel Rubio  
Maximum Test Responsible  
Zamudio, 16th October 2013



Accuracy of the test machine is 1%  
Accuracy of the extensometer is 1%

OBSERVATIONS:

1.- Conditioning procedure:

144 hours at 23°C and 50% relative humidity.

2.- Are there any deviations concerning specimens size tolerance?

There are no deviations.

3.- Other observations:





## TENSILE TEST



Type of material	300 hours aging LSZH	Test Date	03/10/2013	Standard	UNE EN ISO 527- 2/5A/100:2012
Temperature (°C)	22	Relative humidity (%)	57	Method of preparation	Mechanised
Principal axis direction	N.P.	Analyst	A. Alonso	Speed	100mm/min
Type of strain indicator	Video- extensometer	Gauge length (mm)	20	Type of gripping device	Wedge grips
Gripping distance (mm)	50				

Name	Thickness	Width	Tensile strength	Tensile strain at strength	Tensile strain at break
Parameters			Calc. at Entire Areas	Calc. at Entire Areas	Level: 90
Unit	mm	mm	MPa	%	%
P-13-15346-A2-1	1,47	3,99	10,8	150	150
P-13-15346-A2-2	1,38	3,95	11,4	170	170
P-13-15346-A2-3	1,44	3,92	11,5	180	180
P-13-15346-A2-4	1,37	3,97	11,5	170	170
P-13-15346-A2-5	1,40	4,00	11,7	180	180
Average	1,41	3,97	11,4	170	170
Standard Deviation	0,04	0,03	0,34	12,25	12,25

P-13-15346-A2



