



# FIRE CLASSIFICATION TEST REPORT

EN 13501-1:2007 +A1:2010

For

**Flannel**

**Model: STAR07**

**Brand Name: LEDJ**

**Report No.: ENC160802GZ58E1**

**Date of Issue: Aug. 12, 2016**

*Prepared For*

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**GENERAL INFORMATION:**

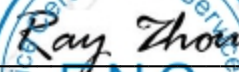
<b>Product Description:</b>	Flannel
<b>Model Number:</b>	STAR07
<b>Model Difference:</b>	All models use the same materials as STAR01
<b>Brand Name:</b>	LEDJ
<b>Applicant:</b>	Prolight Concepts Ltd Perseverance Mill, Olive Lane, Darwen, Lancashire BB3 3DQ (UK)
<b>Manufacturer:</b>	Prolight Concepts Ltd Perseverance Mill, Olive Lane, Darwen, Lancashire BB3 3DQ (UK)
<b>Report No.:</b>	ENC160802GZ58E1
<b>Test Requested:</b>	EN 13501-1:2007+A1:2010 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests, Class B
<b>Test Results:</b>	See attached sheet
<b>Sample Receiving Date:</b>	Aug. 2, 2016
<b>Test Performing Date:</b>	Aug. 2, 2016 – Aug. 12, 2016

Checked By

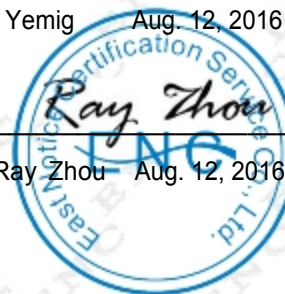


Yemig Aug. 12, 2016

Authorized! By



Ray Zhou Aug. 12, 2016



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## I. Test conducted

This test is conducted as per EN 13501-1:2007+A1:2010 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests. And the test methods as following:

1. EN 13823:2010 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.
2. EN ISO 11925-2:2010+A1:2011 Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test.

## II. Details of classified product

### a) Nature and end use application

The product “Flannel” is defined as a Stage background/Decoration. Its classification is valid for the following end use application:

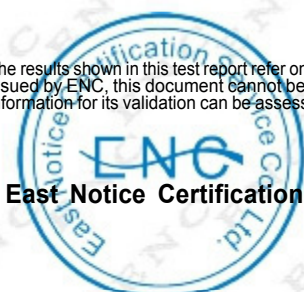
#### a) “Stage background/Decoration”

#### b) Description

The details of the tested specimen given below have been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

General description	Flannel
Trade name / product reference	LEDJ
Name of manufacturer	Prolight Concepts Ltd
Color	Black
End use	Stage background, Decoration

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### III. Test results

Test method	Parameter	Number of tests	Results
EN 13823	FIGRA $\leq$ 120W/S	3	105.3
	LFS < edge of specimen		Yes
	THR <sub>600s</sub> B $\leq$ 7.5MJ		6.8
	SMOGRA (m <sup>2</sup> /s <sup>2</sup> )		27.1
	TSP <sub>600s</sub> (m <sup>2</sup> )		42.0
	Flaming particles or droplets		No

Test method	Parameter	Number of tests	Results
EN ISO 11925-2	60s Fs $\leq$ 150mm	3	106.5
Exposure = 30 s	Ignition of filter paper		No

### IV. Classification and direct field of application

This classification has been carried out in accordance with EN 13501-1:2007+A1:2010.

#### a) Classification

The product, "Flannel" classification is as following:

Fire behaviour	Smoke production		Flaming droplets	
<b>B</b>	<b>S</b>	<b>1</b>	<b>d</b>	<b>0</b>

**CLASSIFICATION: B; S1; d0**

Remark: The classes with their corresponding fire performance are given in annex A.

This classification is valid for the following product parameters:

---Characteristics are described in Annex A of this test report

**Statement:** The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

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**Warning:** This classification report does not represent type approval or certification of the product.

The test laboratory has, therefore, play no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is aimed to be relevant to the samples tested and that will provide for their traceability.

### Annex A

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

Class	Test method(s)	Classification criteria	Additional classification
A1	EN ISO 1182 <sup>a</sup> and	$\Delta T \leq 30^\circ\text{C}$ , and $\Delta m \leq 50\%$ , and $t_f = 0$ (i.e. no sustained flaming)	--
	EN ISO 1716	$\text{PCS} \leq 2.0 \text{ MJ/kg}^a$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^{b,c}$ and $\text{PCS} \leq 1.4 \text{ MJ/m}^2^d$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^e$	--
A2	EN ISO 1182 <sup>a</sup> or	$\Delta T \leq 50^\circ\text{C}$ , and $\Delta m \leq 50\%$ , and $t_f \leq 20 \text{ s}$	--
	and	$\text{PCS} \leq 3.0 \text{ MJ/kg}^a$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^b$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^d$ and $\text{PCS} \leq 3.0 \text{ MJ/kg}^e$	--
	EN ISO 1716		
	EN 13823	$\text{FIGRA} \leq 120 \text{ W/s}$ and $\text{LFS} < \text{edge of specimen}$ and $\text{THR600s} \leq 7.5 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
B	EN 13823 and	$\text{FIGRA} \leq 120 \text{ W/s}$ and $\text{LFS} < \text{edge of specimen}$ and $\text{THR600sB} \leq 7.5 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> Exposure = 30s	$60 \text{ s } F_s \leq 150 \text{ mm}$	
C	EN 13823 and	$\text{FIGRA} \leq 250 \text{ W/s}$ and $\text{LFS} < \text{edge of specimen}$ and $\text{THR600sC} \leq 15 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> Exposure = 30s	$F_s \leq 150 \text{ mm}$ within 60 s	
D	EN 13823 and	$\text{FIGRA} \leq 750 \text{ W/s}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> Exposure = 30s	$F_s \leq 150 \text{ mm}$ within 60 s	

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E	EN ISO 11925-2 <sup>i</sup> Exposure =15s	$F_s \leq 150\text{mm}$ within 20 s	flaming droplets/particles <sup>h</sup>
F	No performance determined		

- <sup>a</sup> For homogeneous products and substantial components of non-homogeneous products.
- <sup>b</sup> For any external non-substantial component of non-homogeneous products.
- <sup>c</sup> Alternatively, any external non-substantial component having a  $PCS \leq 2,0 \text{ MJ/m}^2$ , provided that the product satisfies the following criteria of EN 13823:  $FIGRA \leq 20 \text{ W/s}$ , and  $LFS < \text{edge of specimen}$ , and  $THR_{600s} \leq 4,0 \text{ MJ}$ , and  $s_1$ , and  $d_0$ .
- <sup>d</sup> For any internal non-substantial component of non-homogeneous products.
- <sup>e</sup> For the product as a whole.
- <sup>f</sup> In the last phase of the development of the test procedure, modifications of the smoke measurement system have been introduced, the effect of which needs further investigation. This may result in a modification of the limit values and/or parameters for the evaluation of the smoke production.  
 $s_1 = \text{SMOGR} \leq 30 \text{ m}^2/\text{s}^2$  and  $\text{TSP}_{600s} \leq 50 \text{ m}^2$ ;  $s_2 = \text{SMOGR} \leq 180 \text{ m}^2/\text{s}^2$  and  $\text{TSP}_{600s} \leq 200 \text{ m}^2$ ;  
 $s_3 = \text{not } s_1 \text{ or } s_2$
- <sup>g</sup>  $d_0 = \text{No flaming droplets/ particles in EN 13823 within 600 s}$ ;  
 $d_1 = \text{no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s}$ ;  
 $d_2 = \text{not } d_0 \text{ or } d_1$ .  
 Ignition of the paper in EN ISO 11925-2 results in a  $d_2$  classification.
- <sup>h</sup> Pass = no ignition of the paper (no classification);  
 Fail = ignition of the paper ( $d_2$  classification).
- <sup>i</sup> Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.

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**Photo(s) Appendix**

Overall View of Sample



---- END OF REPORT ----

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