Test Report

Report No	:	L15746
Client:	:	SLP (UK) Limited Unit 11 Faraday Road Aylesbury HP19 8RY
Description	:	U88 Polycarbonate Opalised LED System
Manufacturer	:	Not disclosed
Type/Model	:	17739/ORD UK-A
Test Specification	:	BS 2782-0:2004 – Methods of testing plastics – Annex B (Method 508A: Rate of burning, laboratory method (obsolescent) as referenced in the approved document B / Building Regulations (1))
Date Testing Started	:	03/06/2016
Conclusion	:	Refer to body of report
Date of Issue	:	03/06/2016
Date of Expiry	:	02/06/2021

Tested by: **M. Lloyd**
Position: Team Leader

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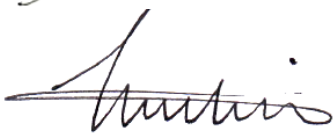
Position: Operations & Quality Manager



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INTRODUCTION

This test report details the results of the burning rate of a thermoplastic material. The tests that were carried out on each material sample were in accordance with BS 2782-0:2004 Method 508A Rate of burning, Laboratory method to determine whether the thermoplastic is TP(a) or TP(b) rated according to The Building Regulations 2010 (Volume 2 – Buildings other than dwelling houses B)

TP(a) rigid is achieved for a specimen of which (at the thickness of the product as put on the market), when tested as above, performs so that the test flam extinguishes before the first mark and the duration of flaming or afterglow does not exceed 5 seconds following removal of the burner.

TP(b) is achieved for other products which, when a specimen of the material between 1.5 and 3mm thick is tested as above, has a rate of burning which does not exceed 50mm/minute.

PRODUCT DETAILS

Table 1. ***Test Sample Details***

Product Description	U88 Polycarbonate Opalised LED System
Model No.	17739/ORD UK-A
Number of Samples	Three
Condition on Receipt	Good
Nominal Dimensions	600mm × 90mm × 3mm
Sampling Method: Test samples selected and supplied by client, no sampling method specified by client.	

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TEST SPECIMENS

A total of 6 test specimens were cut from the material (test specimens A1-A3 were cut from one edge and then specimens B1-B3 were cut in a direction perpendicular to specimens A1-A3)

Each specimen cut from the material was 150mm long, 13mm wide.

The specimens were conditioned for a 24 hour period at an ambient temperature of 25˚C.

PROCEDURE

Two lines were marked on each of the test specimens, one at 25mm and the other at 125mm from one end

The other end of the test specimen was clamped in a rigid support, with its longitudinal axis horizontal and its transverse axis at 45˚ to the horizontal, ensuring that the marks were clearly visible.

A 130mm wire mesh (seven meshes per linear centimetre) was located 6mm below the test specimen with 6mm of the unsupported end protruding beyond the edge of the gauze. (ref. BS 2782-0:2004 Annex B figure B1)

A Bunsen burner with its flame set to between 13-19mm in height was positioned beneath the free end of the specimen so that the flame just contacted the specimen for a period of 10 seconds.

The time for the flame to travel between the 25mm mark and the 125mm mark was recorded in order to determine the burning rate (in mm per minute)

Note: for specimens that did not reach the 1st mark, the duration of flame or afterglow after removal of the Bunsen burner were measured.

The rate of burning for each of the nine specimens was calculated and is tabulated within the test results section of this test report.

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TEST RESULTS

Note: The following test results relate only to the behaviour of the test specimens under the particular conditions of test; they are not intended as a means of assessing the potential fire hazard of the material in use.

Table 2. ***Test Results***

Sample:	Flame Direction	Mark 1 (25mm) Mins-secs	Mark 2 (125mm) Mins-secs	Time taken to extinguish (Seconds)	Standard limit mm/minute	Result
A1	Parallel	DNRM	DNRM	1.21	50	TP(a)
A2	Parallel	DNRM	DNRM	1.37	50	TP(a)
A3	Parallel	DNRM	DNRM	1.33	50	TP(a)
B1*	Perpendicular	DNRM	DNRM	1.81	50	TP(a)
B2*	Perpendicular	DNRM	DNRM	1.92	50	TP(a)
B3*	Perpendicular	DNRM	DNRM	1.90	50	TP(a)

Note: DNRM denotes flame did not reach mark.
*Refer to test deviations on page 5 of this report.

CONCLUSION

All of the specimens under test extinguished before the 1st mark, the time to extinguish including the afterglow did not exceed 5 seconds from removal of the flame and therefore the material under test is classified as TP(a) in accordance with Appendix A-(Performance of materials, products and structures-thermoplastic materials –item 20-classification) of the Building regulations document B 2010 (vol. 1)

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DEVIATION(S) FROM TEST STANDARD

Due to the size limitation and shape of the diffuser the perpendicular test specimens were curved and only 90mm in length, as a result Mark 2 on these specimens was set at 75mm and calculation of burn rate adjusted. Due to groves running perpendicular to the length of the curved samples (B1 – B3) the curvature could not be straightened as the samples were too brittle.

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ILLUSTRATION

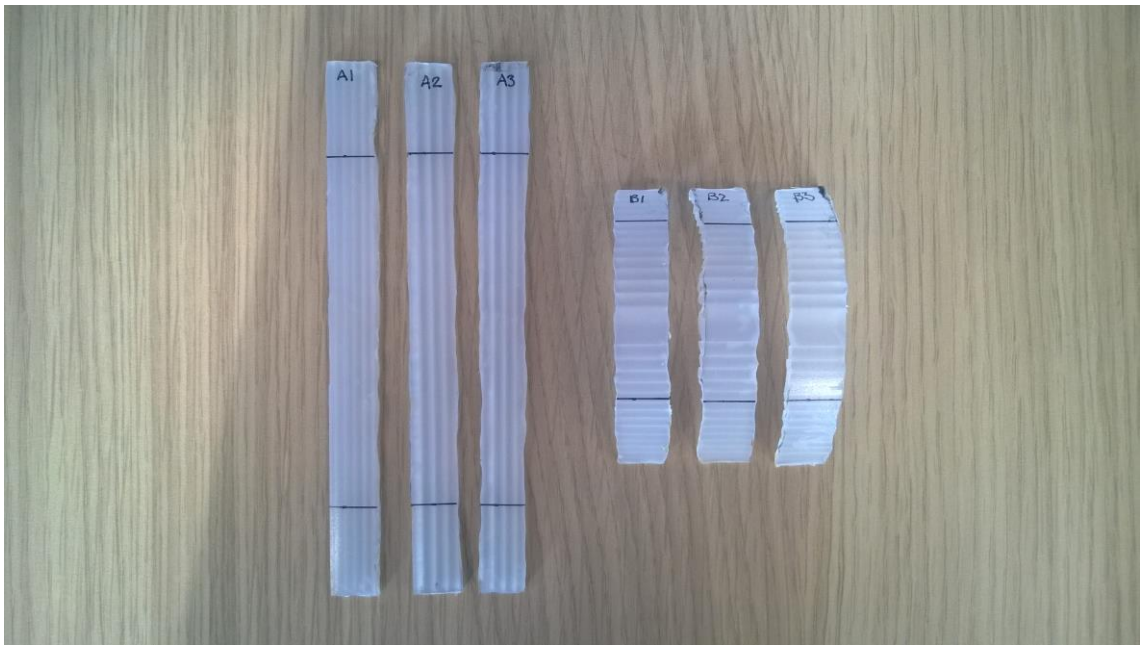

Figure 1. ***Image of test specimens***

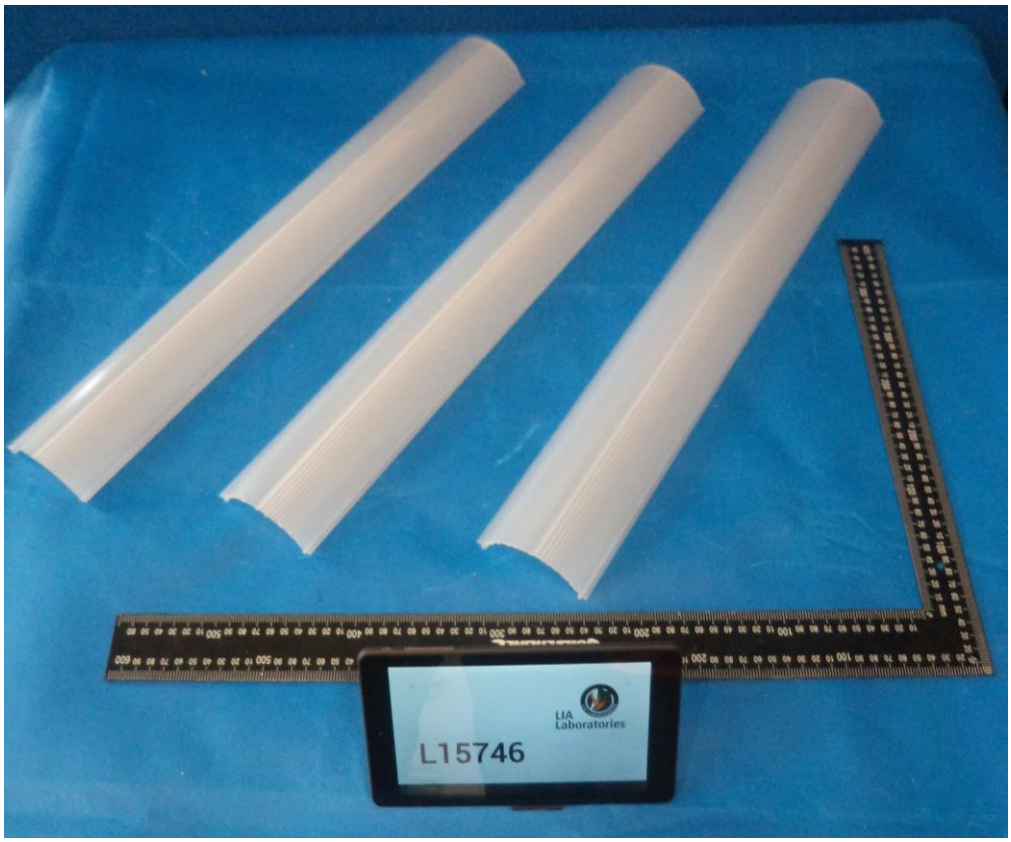

Figure 2. ***Product image***

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