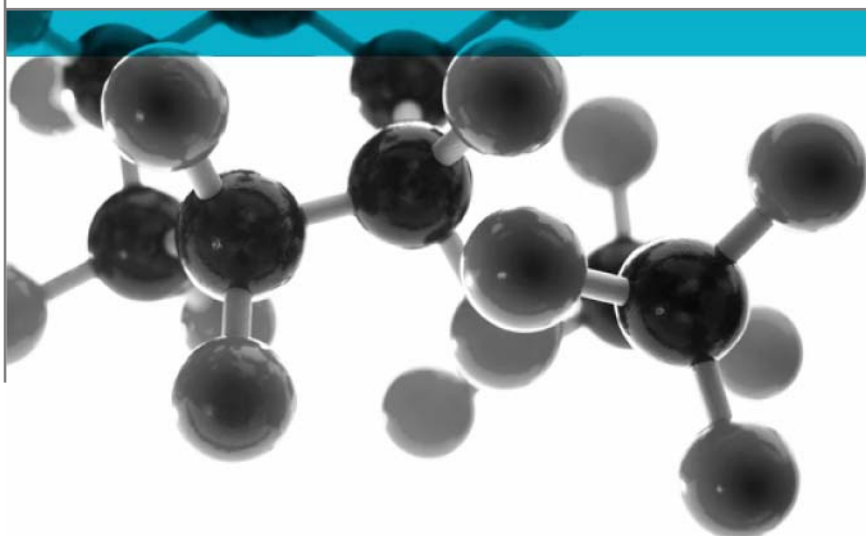


Directive 95/28/EC Annex IV



Test To Determine The Horizontal Burning Rate Of Materials

A Report To: Enzone Plastics 1990 Limited

Document Reference: 307513

Date: 20th May 2011

Issue: 1

Page 1

Testing
Advising
Assuring

Executive Summary

Objective To determine the performance of the following product when tested in accordance with Directive 95/28/EC Annex IV.


Generic Description	Product reference	Thickness	Weight per unit area or density
Polyurethane moulding	"Flam Test Sample"	5.5mm	4.96kg/m ² *
*determined by Exova Warringtonfire			
Please see page 5 of this test report for the full description of the product tested			

Test Sponsor Enzone Plastics 1990 Limited, Cross Street, Bradley, Bilston, West Midlands, WV14 8PT


Test Results: When tested in accordance with Directive 95/28/EC: Annex IV, the product submitted for test did not produce a horizontal burning rate of more than 100mm/minute and therefore, in accordance with Section 7.2.1 of the standard, the test results are deemed to be satisfactory.

Date of Test 17th May 2011

Signatories



Responsible Officer
 C. Jacques *
 Acting Testing Officer



Authorised
 S. Deeming
 Senior Technical Officer

* For and on behalf of **Exova Warringtonfire**.

Report Issued: 20th May 2011

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Test Details

Purpose of test	<p>To determine the flammability of the material when it is tested in accordance with Directive 95 / 28 / EC Annex IV, a test to determine the horizontal burning rate of materials.</p> <p>The test was performed in accordance with the test procedure specified in Directive 95/28/EC Annex IV and this test report should be read in conjunction with that Standard.</p>
Fire test study group/EGOLF	<p>Certain aspects of some fire test specifications are open to different interpretations. The Fire Test Study Group and EGOLF have identified a number of such areas and has agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.</p>
Instruction to test	<p>The test was conducted on the 17th May 2011 at the request of Enzone Plastics 1990 Limited, the sponsor of the test.</p>
Provision of test specimens	<p>The specimens were supplied by the sponsor of the test. Exova Warringtonfire was not involved in any selection or sampling procedure.</p>
Conditioning of specimens	<p>The specimens were received on the 11th May 2011.</p> <p>Prior to the test the specimens were conditioned for at least 24 hours in an atmosphere having a temperature of $23 \pm 2^{\circ}\text{C}$ and a relative humidity of $50 \pm 5\%$.</p>
Test procedure	<p>Five specimens, each measuring 70mm wide by 140mm long, were tested with the decorative surface downwards to the test flame, in accordance with the test procedure specified in the Standard, the gas supplied to the bunsen burner being natural gas.</p>
Specimen orientation	<p>The specimens did not have an obvious observable production direction, therefore the specimens were tested in the direction supplied by the sponsor of the test.</p>

Description of Test Specimens

The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

General description	Polyurethane moulding
Product reference	"Flam Test Sample"
Name of manufacturer	Enzone Plastics
Density	4.96kg/m ² (determined by Exova Warringtonfire)
Thickness	5.5mm (stated by sponsor) 5.48mm (determined by Exova Warringtonfire)
Colour	"Grey"
Trade name of flame retardant	"V490"
Generic type of flame retardant	The sponsor was unable to provide this information
Amount of flame retardant	30%
Brief description of manufacturing process	Mix of polyol, isocyanate, & flame retardant

Test Results

Results of test

The burn rate was calculated using the formula:

$$B = 60 s/t$$

where B = Burning rate in mm per minutes
 s = Burnt distance in mm, and
 t = Time in seconds to burn distance s mm

Specimen No.	Time for flame to reach the first measuring point (seconds)	Time for flame to reach the final measuring point (seconds)	Burning time, <i>t</i> (seconds)	Distance burnt, <i>s</i> (mm)	Burning Rate (mm/min)
1	Did not reach	Did not reach	Not applicable	Not applicable	0
2	Did not reach	Did not reach	Not applicable	Not applicable	0
3	Did not reach	Did not reach	Not applicable	Not applicable	0
4	Did not reach	Did not reach	Not applicable	Not applicable	0
5	Did not reach	Did not reach	Not applicable	Not applicable	0

Conclusion

When tested in accordance with Directive 95/28/EC: Annex IV, the product submitted for test did not produce a horizontal burning rate of more than 100mm/minute and therefore, in accordance with Section 7.2.1 of the standard, the test results are deemed to be satisfactory.

Applicability of test results

The test results relate only to the behaviour of the specimens under the particular conditions of this test, they should not be used to infer the fire hazards of the material in other forms or under other fire conditions.

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product which is supplied or used is fully represented by the specimens which were tested.

Validity

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

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Revision History

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