

test report



UL-94

**Vertical Burning Test For
Classifying Materials 94V-0,
94V-1 Or 94V-2**

WF Report Number

179106

Date:

6th January 2009

Test Sponsor:

Hurst Green Plastics Limited

Bodycote warringtonfire

Test Report No. 179106

**UL-94 - Vertical Burning Test For
Classifying Materials 94V-0, 94V-1 Or 94V-2**

Sponsored By

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Test Details

Purpose of test	To determine the flammability of a plastics material when it is tested in accordance with the test procedure specified in Section 8 - 'Vertical Burning Test for Classifying Materials 94V-0, 94V-1 or 94V-2' of UL94 - 'Test for Flammability of Plastics Materials for Parts in Devices and Appliances'.
Scope of test	<p>The requirements of UL94 cover plastics materials and are intended to serve as a preliminary indication of their suitability with respect to flammability for a particular application. The requirements may be applied to other non-metallic materials, if found to be appropriate.</p> <p>The final acceptance of a material by the Underwriter's Laboratories Inc. is dependant upon its use in complete equipment which conforms with the Standards applicable to such equipment.</p>
Fire test study group/EGOLF	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.
Instruction to test	The test was conducted on the 17 th December 2008 at the request of Hurst Green Plastics Limited, the sponsor of the test.
Provision of test specimens	The specimens were supplied by the sponsor of the test. Bodycote warringtonfire was not involved in any selection or sampling procedure.
Conditioning of specimens	<p>The specimens were received on the 8th December 2008.</p> <p>Five specimens were conditioned for at least 48 hours at a temperature of $23 \pm 2^{\circ}\text{C}$ and a relative humidity of $50 \pm 5\%$ prior to testing.</p> <p>Five specimens were conditioned in a circulating air oven for 168 hours at $70 \pm 1^{\circ}\text{C}$ and were then cooled in a desiccator, over anhydrous calcium chloride, for at least four hours at room temperature prior to testing.</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	Flame retardant grade polycarbonate resin which the sponsor has stated is the clear part of the "TwinBin™ dispenser"
Product reference	"LEXAN 943A"
Detailed description / composition details	Medium viscosity flame retardant grade polycarbonate resin
Name of manufacturer	GE Plastics
Density	1.2 g/cm ³ (stated by sponsor) 1.17g/cm ³ (determined by Bodycote warringtonfire)
Thickness	3.25mm (stated by sponsor) 2.95mm (determined by Bodycote warringtonfire)
Colour	"Opaque"
Flame retardant details	See Note 1 below
Brief description of manufacturing process	See Note 1 below

Note 1. The sponsor of the test was unable to provide this information.

Test Results

Test procedure Each specimen was tested in accordance with the test method specified in the Standard and the following points were observed and recorded for each specimen.

- A - Duration of flaming after first flame application (seconds).
- B - Duration of flaming after second flame application (seconds).
- C - Duration of glowing after second flame application (seconds).
- D - Whether or not the specimens burn up to the holding clamp.
- E - Whether or not the specimens drip flaming particles which ignite cotton swatch.

Results The following results were recorded for the ten specimens tested. The letters correspond to the observations required in section 8.6.1 of the standard.

Specimens conditioned at a temperature of $23 \pm 2^\circ\text{C}$ and a relative humidity of $50 \pm 5\%$.

Specimen No.	A	B	C	D	E
1	1	2	NIL	NO	NO
2	1	2	NIL	NO	NO
3	NIL	3	NIL	NO	NO
4	NIL	2	NIL	NO	NO
5	1	3	NIL	NO	NO

Specimens conditioned at a temperature of $70 \pm 1^\circ\text{C}$ for 168 hours.

Specimen No.	A	B	C	D	E
1	1	2	NIL	NO	NO
2	1	3	NIL	NO	NO
3	1	4	NIL	NO	NO
4	NIL	3	NIL	NO	NO
5	1	2	NIL	NO	NO

Conclusion When the test results are assessed using the test criteria specified in the Standard, the material, when tested at a nominal thickness of 3.25 mm, is designated as "V-0"

Applicability of test results

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

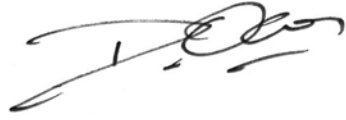
The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that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



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* For and on behalf of **Bodycote warringtonfire**.

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