

**UL 94HBF Horizontal Burning Classification
of "Polar Foam Soya Rigid Foam 7300"**

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ACCREDITATION Standards Council of Canada, Registration #1.

REGISTRATION ISO 9001:2000, registered by QMI, Registration #001109.

SPECIFICATIONS OF ORDER

Perform tests in accordance with the horizontal burning foamed material test of UL 94, "Tests for Flammability of Plastic Materials", as per our Quotation Number 06-02-05912, and your Purchase Order Number 2961.

IDENTIFICATION (Bodycote sample identification number 06-02-S0695)

Polyurethane foam material, identified as: "Polar Foam Soya Rigid Foam 7300" Lot # MC110, date of manufacturing August 23, 2006, date of cutting August 31, 2006..

SUMMARY OF TEST PROCEDURE

Test specimens, 150 x 50 mm, are each marked at 25 mm, 60 mm and 100 mm intervals from one end. Each specimen is supported horizontally with a wire gauze and the end closest to the 60 mm gauge mark is exposed to a specified flame from a wing tip burner for a period of 60 seconds. The time for the flaming or glowing front to travel between the 25 mm mark and the 125 mm mark, or when burning ceases is recorded, and the extent of burning is measured. Afterflame/afterglow and the occurrence of flaming particles are also recorded.

A material classified 94HBF shall:

- A. Not have any specimens with a burning rate exceeding 40 mm per minute over a 100 mm span, or
- B. Have each specimen cease to burn before flaming or glowing reaches the 125 mm gauge mark.

The linear burning rate is calculated as follows: $V = Lb/tb$

Where: V = linear burning rate in mm/s
 Lb = damaged length in mm
 tb = burning time in s

A material classified 94HF-1 or 94HF-2 shall have:

- Afterflame times of no greater than 2 seconds for 4 of 5 specimens tested and no greater than 10 seconds for more than 1 specimen.
- Individual afterglow times of 30 seconds or less.
- Individual damaged lengths of 60 mm or less.
- For 94HF-1 classification, the cotton indicator may not be ignited by flaming particles or drops.

TEST RESULTS

Consideration for HBF Classification

Tested Before Aging: Specimen Conditioning: Minimum 48 hours at 23°C and 50% RH.

<u>Trial</u>	<u>Did Flame Reach 25 mm Gauge Mark?</u>	<u>Burn Distance after 25 mm Gauge Mark (mm)</u>	<u>Burning Duration after 25 mm Gauge Mark (s)</u>	<u>Burning Rate (mm/min.)</u>
1:	No	-	-	-
2:	No	-	-	-
3:	No	-	-	-
4:	No	-	-	-
5:	No	-	-	-

Tested After Aging: Specimen Conditioning: 168 hours at 70°C followed by minimum 4 hrs. at 23°C and <20% RH.

<u>Trial</u>	<u>Did Flame Reach 25 mm Gauge Mark?</u>	<u>Burn Distance after 25 mm Gauge Mark (mm)</u>	<u>Burning Duration after 25 mm Gauge Mark (s)</u>	<u>Burning Rate (mm/min.)</u>
1:	No	-	-	-
2:	No	-	-	-
3:	No	-	-	-
4:	No	-	-	-
5:	No	-	-	-

Consideration for HF-1 or HF-2 Classifications

Tested Before Aging: Specimen Conditioning: Minimum 48 hours at 23°C and 50% RH.

<u>Trial</u>	<u>Afterflame Time (s)</u>	<u>Afterglow Time (s)</u>	<u>Reach 60 mm Reference Mark?</u>	<u>Cotton Indicator Ignited?</u>
1:	0	0	No	No
2:	0	0	No	No
3:	0	0	No	No
4:	0	0	No	No
5:	0	0	No	No


TEST RESULTS (Cont..)


Tested After Aging: Specimen Conditioning: 168 hours at 70°C followed by minimum 4 hrs. at 23°C and <20% RH.

<u>Trial</u>	<u>Afterflame Time (s)</u>	<u>Afterglow Time (s)</u>	<u>Reach 60 mm Reference Mark?</u>	<u>Cotton Indicator Ignited?</u>
1:	0	0	No	No
2:	0	0	No	No
3:	0	0	No	No
4:	0	0	No	No
5:	0	0	No	No

CONCLUSIONS

When tested according to the UL 94 horizontal burning foamed material test procedure, the foam material identified in this report meets the criteria to qualify for a 94HBF classification, as well meets the criteria for a 94HF-1 or 94HF-2 classification.


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Richard J. Lederle,
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Note: This report consists of 4 pages, including the cover page, that comprise the report "body". It should be considered incomplete if all pages are not present..