ASTRA PRODUCTS LTD

7154 State Route 88 • P O Box 848 • Ravenna, OH 44266 USA Tel: (330) 296-0112 Toll Free 1-800-424-2823 Fax: (330) 296-8380

To Whom It May Concern:

Please find attached our most recent flammability testing report for Astra Products Ltd. Vertical PVC. All vertical vanes manufactured by Astra are manufactured using the materials tested by Govmark Organization, Inc. in their report attached.

The vertical vane samples submitted to Govmark for testing were tested to NFPA 701-1999 Edition Test Method 1. This test is specifically designed for window coverings, and is mandated for window coverings in public buildings.

As you will see from this report, Astra's materials meet the conditions for passing this test.

Sincerely,

John Oblisk

John Oblisk
Operations Director
Astra Products Ltd.

The Govmark Organization, Inc.

96D Allen Blvd.
Farmingdale, NY 11735
TEL: (516) 293-8944
FAX: (516) 293-8956

Client Name : Astra
Addendum to Test Report # : 2-51629-0-
Test : NFPA 701

Specimen #	Weight Before Test (g)	Weight After Test (g)	Percent Weight Loss
1	43.30	41.90	3.2
2	43.00	41.70	3.0
3	42.60	41.30	3.1
4	42.60	42.00	1.4
5	43.00	42.10	2.1
6	42.80	42.30	1.2
7	42.50	42.30	0.5
8	42.50	41.50	2.4
9	43.00	42.70	0.7
10	42.80	42.50	0.7

Mean Percent Weight Loss : 1.8
Standard Deviation : 1.1
3 x Standard Deviation : 3.2
Mean + 3 x Standard Deviation : 5.0

The Govmark Organization, Inc.

96-D Allen Boulevard
Farmingdale, New York 11735-5626 USA
Tel. +1 (631) 293-8944 Fax +1 (631) 293-8956
e-mail: info@govmark.com

Received: 06/22/2004	Completed: 06/28/2004	Letter: O	rb	P.O.#:	Test Report #:	2-51629-0-
Client's Identification	Product Name's: Raffia Flaxtone. Style: 3½" PVC Vertical Blinds Used For Window Coverings. Fiber Content: PVC. Width (inch): 3½" each. Finish: Film.					

Tested For: Joe Day
Astra Products Ltd.
7154 State Route 88
Ravenna, OH 44266

Key Test: NFPA 701-99 TM#1 150

Tel: 1-(330)-296-0112 **Ext:** 155
Fax: 1-(330)-296-8380

PC: 0.5H

TEST PERFORMED: NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films (Not Exceeding 700 g/m²) - 1999 Edition - Test Method #1 (see Note on page 3)

PRODUCT CONFIGURATION: [x] Single Layer; [ ] Multi Layer

RESULTS REPORTED: [x] Initially; [ ] After 3 dry cleanings; [ ] After 5 launderings @ 160°F

RESULTS:

Specimen #	Afterflame* (seconds)	Flaming Drip (seconds)	Weight Loss (percent)	Flame Projects Above Top Of Specimen (yes/no)
1	0	0	3.2	No
2	0	0	3.0	No
3	0	0	3.1	No
4	0	0	1.4	No
5	0	0	2.1	No
6	0	0	1.2	No
7	0	0	0.5	No
8	0	0	2.4	No
9	0	0	0.7	No
10	0	0	0.7	No
	Mean: 0		Mean: 1.8	

STATISTICAL VALUES: SD = 1.1 3 SD = 3.2 Mean + 3 SD = 5.0

ABBREVIATIONS USED: SD = Standard deviation.

PRECONDITIONING: [ ] 0.5 hr @ 220°F (Standard)
[x] 24 hrs @ 68±9°F (Alternate: Material shrinks/distorts @ 220°F)

NOTE:
1. All specimens prepared in the length direction.
2. See addendum for individual specimen weights.

REMARKS: None.

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Tel. +1 (631) 293-8944 Fax +1 (631) 293-8956
e-mail: info@govmark.com

Received: 06/22/2004	Completed: 06/28/2004	Letter: O	rb	P.O.#:	Test Report #:	2-51629-0-
Client's Identification	Product Name's: Raffia Flaxtone. Style: 3½" PVC Vertical Blinds Used For Window Coverings. Fiber Content: PVC. Width (inch): 3½" each. Finish: Film.					

Tested For: Joe Day
Astra Products Ltd.
7154 State Route 88
Ravenna, OH 44266

Key Test: NFPA 701-99 TM#1 150

Tel: 1-(330)-296-0112 **Ext:** 155
Fax: 1-(330)-296-8380

FAILURE CRITERIA: As cited by NFPA 701 - 1999 Edition Test Method #1 (see Comments on page 3)

		Weight Loss (percent)	
	Flaming Drip		
Afterflame	Mean	Mean	- Individual Specimen
*	Exceeds 2 seconds	Exceeds 40%	Exceeds Mean + 3 SD

CONCLUSION: Based on the Results on page 1 and the above Failure Criteria cited by NFPA 701 - 1999 Edition Test Method #1, the item tested:

[x] Passes; [ ] Fails; [ ] Requires testing of 10 additional specimens
i.e. only one individual specimen failure was noted

REVISED FAILURE CRITERIA (see Comments on page 3):

		Weight Loss		
	Flaming Drip			Flame Height
Afterflame	Mean	Mean	Ind. Spec.	(Individual Specimen)
*	Exceeds 2 seconds	Exceeds 40%	Exceeds 50%	Projects above top of specimen

CONCLUSION: Based on the Results on page 1 and the above Revised Failure Criteria, the item tested:

[x] Passes; [ ] Fails; [ ] Requires testing of 10 additional specimens
i.e. only one individual specimen failure was noted

* Afterflame is required to be recorded; however, the NFPA document does not factor it into the Failure Criteria reporting requirements. It should be noted that excessive afterflames (15 seconds or more) could be cause for rejection by local fire authorities performing "match" field tests.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified by NFPA 701 - 1999 Edition Test Method #1 with the additional reporting of flames which project above the top of the specimen.

AUTHORIZED SIGNATURE
THE GOVMARK ORGANIZATION, INC. /jd

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The Govmark Organization, Inc.

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Tel. +1 (631) 293-8944 Fax +1 (631) 293-8956
e-mail: info@govmark.com

Received:06/22/2004	Completed:06/28/2004	Letter: O	rb	P.O.#:	Test Report #:	2-51629-0-
Client's Identification	Product Name's: Raffia Flaxtone. Style: 3½" PVC Vertical Blinds Used For Window Coverings. Fiber Content: PVC. Width (inch): 3½" each. Finish: Film.					

Tested For: **Joe Day**
Astra Products Ltd.
7154 State Route 88
Ravenna, OH 44266

Key Test: NFPA 701-99 TM#1 150

Tel: 1-(330)-296-0112 **Ext:** 155
Fax: 1-(330)-296-8380

COMMENTS:
The Govmark Org., Inc. has determined to establish failure criteria over and above the criteria spelled out in the NFPA document. The rationale for the "revised" criteria is as follows:

Weight Loss - Individual Specimen Failure:

The NFPA 701 document, as written, provides for a statistical calculation which provides for retest and a potential failure if any individual value exceeds the mean by three standard deviations. Govmark is of the opinion that this cannot mathematically occur, i.e. no individual result is mathematically capable of exceeding the mean plus three standard deviations. Therefore, Govmark has established 50% as the absolute number for individual specimen criteria.

Individual Specimen - Flame Projects Above Top of Specimen:

When NFPA introduced the weight loss criteria, this was hailed as a more objective measure of product performance over previous editions, which relied on visual measurements of fire degradation. Unforeseen were those products which are composed of finishes over substantially non burning substrates. Intense flaming of the finishes occurs without substantially reducing the total weight of the specimen that was tested. It is believed that similar behavior of the intensely burning surface finishes on products made from such material could result in the ignition of nearby combustibles.

NOTE (April 2000):
The NFPA 701 - 1999 Edition supersedes the NFPA 701 - 1996 Edition.
The step-by-step test implementation and test failure criteria are the same for both the 1996 Edition and the 1999 Edition.
Therefore, it is assumed that this 1999 Edition test report will also satisfy any building code which cites the 1996 Edition.

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Farmingdale, NY 11735
TEL: (516) 293-8944
FAX: (516) 293-8956

Client Name : Astra
Addendum to Test Report # : 2-51628-0-KM
Test : : NFPA 701

Specimen #	Weight Before Test (g)	Weight After Test (g)	Percent Weight Loss
1	43.30	41.70	3.7
2	43.40	42.90	1.2
3	43.10	42.50	1.4
4	43.60	42.80	1.8
5	43.20	43.00	0.5
6	43.10	42.00	2.6
7	42.90	42.00	2.1
8	43.40	42.20	2.8
9	43.30	41.90	3.2
10	43.20	41.90	3.0

Mean Percent Weight Loss : 2.2
Standard Deviation : 1.0
3 x Standard Deviation : 3.1
Mean + 3 x Standard Deviation : 5.3

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e-mail: info@govmark.com

Received: 06/22/2004	Completed: 06/28/2004	Letter: N	rb	P.O.#:	Test Report #:	2-51628-0-
Client's Identification	Product Name's: Waterford Desert Beige. Style:3½" PVC Vertical Blinds Used For Window Coverings. Fiber Content: PVC. Width (inch): 3½" each. Finish: Ink.					

Tested For: **Joe Day**
Astra Products Ltd.
7154 State Route 88
Ravenna, OH 44266

Key Test: NFPA 701-99 TM#1 150

Tel: 1-(330)-296-0112 **Ext:** 155
Fax: 1-(330)-296-8380

PC: 0.5H

TEST PERFORMED: NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films (Not Exceeding 700 g/m²) - 1999 Edition - Test Method #1 (see Note on page 3)

PRODUCT CONFIGURATION: [x] Single Layer; [ ] Multi Layer

RESULTS REPORTED: [x] Initially; [ ] After 3 dry cleanings; [ ] After 5 launderings @ 160°F

RESULTS:

Specimen #	Afterflame* (seconds)	Flaming Drip (seconds)	Weight Loss (percent)	Flame Projects Above Top Of Specimen (yes/no)
1	0	0	3.7	No
2	0	0	1.2	No
3	0	0	1.4	No
4	0	0	1.8	No
5	0	0	0.5	No
6	0	0	2.6	No
7	0	0	2.1	No
8	0	0	2.8	No
9	0	0	3.2	No
10	0	0	3.0	No
	Mean:	0	Mean:	2.2

STATISTICAL VALUES: SD = 1.0 3 SD = 3.1 Mean + 3 SD = 5.3

ABBREVIATIONS USED: SD = Standard deviation.

PRECONDITIONING: [ ] 0.5 hr @ 220°F (Standard)
[x] 24 hrs @ 68±9°F (Alternate: Material shrinks/distorts @ 220°F)

NOTE:
1. All specimens prepared in the length direction.
2. See addendum for individual specimen weights.

REMARKS: None.

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Received: 06/22/2004	Completed: 06/28/2004	Letter: N	rb	P.O.#:	Test Report #:	2-51628-0-
Client's Identification	Product Name's: Waterford Desert Beige. Style:3½" PVC Vertical Blinds Used For Window Coverings. Fiber Content: PVC. Width (inch): 3½" each. Finish: Ink.					

Tested For: **Joe Day**
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Tel: 1-(330)-296-0112 **Ext:** 155
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FAILURE CRITERIA: As cited by NFPA 701 - 1999 Edition Test Method #1 (see Comments on page 3)

Afterflame	Flaming Drip Mean	Weight Loss (percent) Mean	Weight Loss (percent) Individual Specimen
*	Exceeds 2 seconds	Exceeds 40%	Exceeds Mean + 3 SD

CONCLUSION: Based on the Results on page 1 and the above Failure Criteria cited by NFPA 701 - 1999 Edition Test Method #1, the item tested:

[x] Passes; [ ] Fails; [ ] Requires testing of 10 additional specimens
i.e. only one individual specimen failure was noted

REVISED FAILURE CRITERIA (see Comments on page 3):

Afterflame	Flaming Drip Mean	Weight Loss Mean	Weight Loss Ind. Spec.	Flame Height (Individual Specimen)
*	Exceeds 2 seconds	Exceeds 40%	Exceeds 50%	Projects above top of specimen

CONCLUSION: Based on the Results on page 1 and the above Revised Failure Criteria, the item tested:

[x] Passes; [ ] Fails; [ ] Requires testing of 10 additional specimens
i.e. only one individual specimen failure was noted

* Afterflame is required to be recorded; however, the NFPA document does not factor it into the Failure Criteria reporting requirements. It should be noted that excessive afterflames (15 seconds or more) could be cause for rejection by local fire authorities performing "match" field tests.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified by NFPA 701 - 1999 Edition Test Method #1 with the additional reporting of flames which project above the top of the specimen.

AUTHORIZED SIGNATURE
THE GOVMARK ORGANIZATION, INC. /jd

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Received:06/22/2004	Completed:06/28/2004	Letter: N	rb	P.O.#:	Test Report #:	2-51628-0-
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The step-by-step test implementation and test failure criteria are the same for both the 1996 Edition and the 1999 Edition.
Therefore, it is assumed that this 1999 Edition test report will also satisfy any building code which cites the 1996 Edition.

Material Safety Data Sheet

Identity (As Used on Label)
AP1000(XX), AP2000(XX) Weatherable, Type II Rigid PVC Compound

Section I

Manufacturer's Name:

Aurora Plastics, Inc. (API)

Address:

11444 Chamberlain Road
Aurora, OH 44202

Telephone/Fax Number:

Telephone: 330-995-2994
Fax: 330-995-2997

Date Prepared:

May 10, 1998

Section II – Hazardous Ingredients/Identity Information

Hazardous Components:	OSHA PEL	ACGIH-TLV	CAS NUMBER
Vinyl Chloride Monomer	1 ppm/ 8hr TWA	5 ppm	75-01-4
Titanium Dioxide	15mg/CM	10mg/CM	13463-67-7
Calcium Carbonate	15mg/CM (Total dust)	15mg/CM (Total dust)	1317-65-3
Calcium Stearate	(not established)	10mg/CM	1592-23-0

This product is predominately polyvinyl chloride, a substance not considered to be a hazardous chemical based on evaluations made by our company under the OSHA Hazard Communication Standard, 29 C.F.R. & 1910.1200.

Section III – Physical/Chemical Characteristics

Specific Gravity (H_2O = 1):

>1.2

Solubility in Water:

Slight

Appearance and Odor:

Fine powder of various colors. Bland odor

Section IV – Fire and Explosive Hazard Data

Flash Point (Method Used):

735°F (COC)

Extinguishing Media:

Water or ABC dry chemical

Special Fire Fighting Procedures:

Fire fighters should use self-contained breathing apparatus in the positive pressure mode.

Unusual Fire and Explosion Hazards:

This product evolves hydrogen chloride, carbon monoxide, and small amounts of various hydrocarbons when burned. Carbon monoxide and carbon dioxide are asphyxiates and hydrogen chloride is an irritant and corrosive.

Section V – Reactivity Data

Stability:	**Conditions to Avoid:**
Stable	Prevent cross contamination of feed stocks

Hazardous Decomposition or Byproducts:

Hydrogen chloride, carbon monoxide, and carbon dioxide

Hazardous Polymerization:

Will not occur

Section VI – Health Hazard Data

Route(s) of Exposure:	Inhalation:	Skin:	Ingestion:
	Yes	Yes	No

Health Hazards (Acute and Chronic):

Inhalation may cause nausea, discomfort, and central nervous system effects. Exposure to dust may cause irritation of skin, eyes, and respiratory tract.

Carcinogenicity:	NTP:	IARC Monographs:	OSHA Regulated:
	No	No	No

Signs and Symptoms of Exposure:

Nausea, discomfort, headache, dizziness, eye, skin, and respiratory tract irritation.

Emergency and First Aid Procedures:

If symptoms occur, remove affected individual from the area. Wash or flush affected areas thoroughly with flowing water for 15 minutes. Wash skin with mild soap and water. Irritation persists, seek medical attention.

Section VII – Precautions for Safe Handling and Use

Steps to be taken in Case Material is Released or Spilled:

Vacuum or sweep into closed container.

Waste Disposal Method:

Dispose of waste in a licensed landfill or by incineration in accordance with federal, state and local laws and regulations.

Precautions to be taken in Handling and Storing:

Inhalation of dust should be avoided. Exercise care when dumping bags, sweeping, mixing or performing other tasks that might create dust

Section VIII – Control Measures

Respiratory Protection:

Where large amounts of dust may occur, wear **NIOSH/MSHA** approved dust/mist respirator.

Protective Gloves:

Wear protective gloves if handling hot material.

Eye Protection:

Safety glasses are recommended when handling this product.

SARA Title III

This product does not contain any toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization ACT of 1986 and C.F.R. Part 372.

Information contained herein is believed to be true and accurate, but all statements or suggestions are made without warranty, express or implied, regarding the accuracy of information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and regulations remain the responsibility of the user.