

# NFRC Product Certification Authorization Report



**Manufacturer:** MGM Industries  
**Street:** 287 Free Hill Road  
**City/State/Zip:** Hendersonville, TN 37075  
**Print Date:** 10/06/2011

**Product Series:** 5610 Single Hung  
**Product Type:** VSSH  
**Air Leakage:**

**Simulation Lab:** SNCT  
**Sim. Report #:** NCTL-110-14250-01  
**Sim. Report Date:** 08/16/2011  
**Test Date:** 09/19/2011

**Initial Cert. Date:** 01/11/2008  
**Re-Certification Date:** 10/06/2011  
**Revised Date:** 08/16/2011  
**Expiration Date:** 09/19/2015

CPD Number: MGM-A-19

IA: American Architectural Manufacturers Association

Status	Product Num.	Manufacturer Code	Frame/Sash	Glaz Lyrs	Low-E (Surface)	Gap Width(s)	Spacer	Gap Fill	Grids	Dividers	Tint	U-Factor	SHGC	VT	Cond. Res.
	00016-00001	2mm Clear/AIR/2mm Clear	VY/VY	2		0.553	SU-D	Fill 1: AIR (100)	N		CL	0.46	0.62	0.65	45
	00016-00002	2mm Clear/AIR/2mm Clear	VY/VY	2		0.553	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.46	0.56	0.58	45
	00016-00003	3mm Clear/AIR/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: AIR (100)	N		CL	0.46	0.61	0.65	45
	00016-00004	3mm Clear/AIR/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.46	0.55	0.58	45
	00016-00005	3mm Gray/AIR/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: AIR (100)	N		GY	0.46	0.48	0.44	45
	00016-00006	3mm Gray/AIR/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: AIR (100)	G	0.75	GY	0.46	0.43	0.39	45
	00016-00007	3mm Bronze/AIR/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: AIR (100)	N		BZ	0.46	0.49	0.48	45
	00016-00008	3mm Bronze/AIR/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: AIR (100)	G	0.75	BZ	0.46	0.44	0.43	45
	00017-00001	2 mm LoE <sup>2</sup> 270/AIR/2mm Clear	VY/VY	2	0.037(2)	0.553	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.29	0.55	56
	00017-00002	2 mm LoE <sup>2</sup> 270/AIR/2mm Clear	VY/VY	2	0.037(2)	0.553	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.26	0.49	56
	00017-00003	3 mm LoE <sup>2</sup> 270/AIR/3mm Clear	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.29	0.55	56
	00017-00004	3 mm LoE <sup>2</sup> 270/AIR/3mm Clear	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.26	0.49	56
	00017-00005	2mm Clear/AIR/2 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.553	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.36	0.55	56
	00017-00006	2mm Clear/AIR/2 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.553	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.33	0.49	56
	00017-00007	3mm Clear/AIR/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.36	0.55	56
	00017-00008	3mm Clear/AIR/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.32	0.49	56
	00017-00009	3mm Gray/AIR/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: AIR (100)	N		GY	0.32	0.28	0.38	56
	00017-00010	3mm Gray/AIR/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	GY	0.32	0.25	0.34	56
	00017-00011	3mm Bronze/AIR/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: AIR (100)	N		BZ	0.32	0.29	0.41	56
	00017-00012	3mm Bronze/AIR/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	BZ	0.32	0.26	0.37	56
	00017-00013	3 mm LoE <sup>2</sup> 270/AIR/3mm Gray	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: AIR (100)	N		GY	0.32	0.28	0.38	56
	00017-00014	3 mm LoE <sup>2</sup> 270/AIR/3mm Gray	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	GY	0.32	0.25	0.34	56
	00017-00015	3 mm LoE <sup>2</sup> 270/AIR/3mm Bronze	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: AIR (100)	N		BZ	0.32	0.28	0.41	56
	00017-00016	3 mm LoE <sup>2</sup> 270/AIR/3mm Bronze	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	BZ	0.32	0.26	0.37	56
	00018-00001	2 mm LoE <sup>2</sup> 270/ARG/2mm Clear	VY/VY	2	0.037(2)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.29	0.55	60

# NFRC Product Certification Authorization Report



<b>Manufacturer:</b> MGM Industries	<b>Product Series:</b> 5610 Single Hung	<b>Simulation Lab:</b> SNCT	<b>Initial Cert. Date:</b> 01/11/2008
<b>Street:</b> 287 Free Hill Road	<b>Product Type:</b> VSSH	<b>Sim. Report #:</b> NCTL-110-14250-01	<b>Re-Certification Date:</b> 10/06/2011
<b>City/State/Zip:</b> Hendersonville, TN 37075	<b>Air Leakage:</b>	<b>Sim. Report Date:</b> 08/16/2011	<b>Revised Date:</b> 08/16/2011
<b>Print Date:</b> 10/06/2011		<b>Test Date:</b> 09/19/2011	<b>Expiration Date:</b> 09/19/2015

CPD Number: MGM-A-19

IA: American Architectural Manufacturers Association

Status	Product Num.	Manufacturer Code	Frame/Sash	Glaz Lyrs	Low-E (Surface)	Gap Width(s)	Spacer	Gap Fill	Grids	Dividers	Tint	U-Factor	SHGC	VT	Cond. Res.
	00018-00002	2 mm LoE <sup>2</sup> 270/ARG/2mm Clear	VY/VY	2	0.037(2)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.26	0.49	60
	00018-00003	3 mm LoE <sup>2</sup> 270/ARG/3mm Clear	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.29	0.55	60
	00018-00004	3 mm LoE <sup>2</sup> 270/ARG/3mm Clear	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.26	0.49	60
	00018-00005	2mm Clear/ARG/2 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.37	0.55	60
	00018-00006	2mm Clear/ARG/2 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.33	0.49	60
	00018-00007	3mm Clear/ARG/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.36	0.55	60
	00018-00008	3mm Clear/ARG/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.33	0.49	60
	00018-00009	3mm Gray/ARG/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		GY	0.28	0.27	0.38	60
	00018-00010	3mm Gray/ARG/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	GY	0.28	0.25	0.34	60
	00018-00011	3mm Bronze/ARG/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		BZ	0.28	0.29	0.41	60
	00018-00012	3mm Bronze/ARG/3 mm LoE <sup>2</sup> 270	VY/VY	2	0.037(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	BZ	0.28	0.26	0.37	60
	00018-00013	3 mm LoE <sup>2</sup> 270/ARG/3mm Gray	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		GY	0.28	0.28	0.38	60
	00018-00014	3 mm LoE <sup>2</sup> 270/ARG/3mm Gray	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	GY	0.28	0.25	0.34	60
	00018-00015	3 mm LoE <sup>2</sup> 270/ARG/3mm Bronze	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		BZ	0.28	0.28	0.41	60
	00018-00016	3 mm LoE <sup>2</sup> 270/ARG/3mm Bronze	VY/VY	2	0.037(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	BZ	0.28	0.26	0.37	60
	00019-00001	2 mm LoE <sup>3</sup> 366/AIR/2mm Clear	VY/VY	2	0.022(2)	0.553	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.22	0.51	56
	00019-00002	2 mm LoE <sup>3</sup> 366/AIR/2mm Clear	VY/VY	2	0.022(2)	0.553	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.20	0.46	56
	00019-00003	3 mm LoE <sup>3</sup> 366/AIR/3mm Clear	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.22	0.51	56
	00019-00004	3 mm LoE <sup>3</sup> 366/AIR/3mm Clear	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.20	0.45	56
	00019-00005	2mm Clear/AIR/2 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.553	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.31	0.51	56
	00019-00006	2mm Clear/AIR/2 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.553	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.28	0.46	56
	00019-00007	3mm Clear/AIR/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: AIR (100)	N		CL	0.32	0.30	0.51	56
	00019-00008	3mm Clear/AIR/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	CL	0.32	0.27	0.45	56
	00019-00009	3mm Gray/AIR/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: AIR (100)	N		GY	0.32	0.23	0.35	56
	00019-00010	3mm Gray/AIR/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	GY	0.32	0.21	0.31	56

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**Product Type:** VSSH  
**Air Leakage:**

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CPD Number: MGM-A-19

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Status	Product Num.	Manufacturer Code	Frame/Sash	Glaz Lyrs	Low-E (Surface)	Gap Width(s)	Spacer	Gap Fill	Grids	Dividers	Tint	U-Factor	SHGC	VT	Cond. Res.
	00019-00011	3mm Bronze/AIR/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: AIR (100)	N		BZ	0.32	0.25	0.38	56
	00019-00012	3mm Bronze/AIR/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	BZ	0.32	0.22	0.34	56
	00019-00013	3 mm LoE <sup>3</sup> 366/AIR/3mm Gray	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: AIR (100)	N		GY	0.32	0.21	0.35	56
	00019-00014	3 mm LoE <sup>3</sup> 366/AIR/3mm Gray	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	GY	0.32	0.19	0.31	56
	00019-00015	3 mm LoE <sup>3</sup> 366/AIR/3mm Bronze	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: AIR (100)	N		BZ	0.32	0.21	0.38	56
	00019-00016	3 mm LoE <sup>3</sup> 366/AIR/3mm Bronze	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: AIR (100)	G	0.75	BZ	0.32	0.19	0.34	56
	00020-00001	2 mm LoE <sup>3</sup> 366/ARG/2mm Clear	VY/VY	2	0.022(2)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.22	0.51	60
	00020-00002	2 mm LoE <sup>3</sup> 366/ARG/2mm Clear	VY/VY	2	0.022(2)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.20	0.46	60
	00020-00003	3 mm LoE <sup>3</sup> 366/ARG/3mm Clear	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.22	0.51	60
	00020-00004	3 mm LoE <sup>3</sup> 366/ARG/3mm Clear	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.20	0.45	60
	00020-00005	2mm Clear/ARG/2 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.31	0.51	60
	00020-00006	2mm Clear/ARG/2 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.553	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.28	0.46	60
	00020-00007	3mm Clear/ARG/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		CL	0.28	0.31	0.51	60
	00020-00008	3mm Clear/ARG/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	CL	0.28	0.28	0.45	60
	00020-00009	3mm Gray/ARG/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		GY	0.28	0.23	0.35	60
	00020-00010	3mm Gray/ARG/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	GY	0.28	0.21	0.31	60
	00020-00011	3mm Bronze/ARG/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		BZ	0.28	0.24	0.38	60
	00020-00012	3mm Bronze/ARG/3 mm LoE <sup>3</sup> 366	VY/VY	2	0.022(3)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	BZ	0.28	0.22	0.34	60
	00020-00013	3 mm LoE <sup>3</sup> 366/ARG/3mm Gray	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		GY	0.28	0.21	0.35	60
	00020-00014	3 mm LoE <sup>3</sup> 366/ARG/3mm Gray	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	GY	0.28	0.19	0.31	60
	00020-00015	3 mm LoE <sup>3</sup> 366/ARG/3mm Bronze	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		BZ	0.28	0.21	0.38	60
	00020-00016	3 mm LoE <sup>3</sup> 366/ARG/3mm Bronze	VY/VY	2	0.022(2)	0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	BZ	0.28	0.19	0.34	60
	00021-00001	3mm Gray/ARG/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		GY	0.44	0.47	0.44	45
	00021-00002	3mm Gray/ARG/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	GY	0.44	0.43	0.39	45
	00021-00003	3mm Bronze/ARG/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: ARG/AIR (95/5)	N		BZ	0.44	0.49	0.48	45

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**Manufacturer:** MGM Industries      **Product Series:** 5610 Single Hung      **Simulation Lab:** SNCT      **Initial Cert. Date:** 01/11/2008  
**Street:** 287 Free Hill Road      **Product Type:** VSSH      **Sim. Report #:** NCTL-110-14250-01      **Re-Certification Date:** 10/06/2011  
**City/State/Zip:** Hendersonville, TN 37075      **Air Leakage:**      **Sim. Report Date:** 08/16/2011      **Revised Date:** 08/16/2011  
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CPD Number: MGM-A-19

IA: American Architectural Manufacturers Association

Status	Product Num.	Manufacturer Code	Frame/Sash	Glaz Lyrs	Low-E (Surface)	Gap Width(s)	Spacer	Gap Fill	Grids	Dividers	Tint	U-Factor	SHGC	VT	Cond. Res.
	00021-00004	3mm Bronze/ARG/3mm Clear	VY/VY	2		0.514	SU-D	Fill 1: ARG/AIR (95/5)	G	0.75	BZ	0.44	0.44	0.43	45

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**Baseline Information**

<b>Test Lab</b>	<b>Test Date</b>	<b>Test Size</b>	<b>Tested U-Value</b>	<b>Standard U-Value</b>	<b>Test Report Number</b>
<b>TNCT</b>	<b>09/19/2011</b>	1200mm X 1500mm	0.320	0.310	NCTL-110-14251-1

**Comments:**

I hereby certify that all requirements for NFRC Certification Authorization have been met and that the above information is true and correct, to the best of my knowledge.

Authorized IA  
Signature: \_\_\_\_\_