

**BURNING BRAND TEST -ANSI /UL790 (Eighth Edition)**

Project: 10CA23622                      File: R20610                      TestCode: 07081002  
Tested by: PASTOR                      Engineer: RHODES                      Date: 07/08/10  
Employee #: 14333                      44947

The test deck was constructed in accordance with paragraph 4.2  
The roof covering material was applied in accordance with paragraph 4.4  
The test sample was conditioned in accordance with paragraph 4.5

**BURNING BRAND TEST -ANSI /UL790 (Eighth Edition)**

Client Name: NRCA	Brand Weight (g): 1950
System No. 1	Test No.: 2
Class: A	Slope (in/ft): 5
	Deck Thickness (in): 1
	Ambient Temp (°F): 86

**System Description:**

# 30 underlayment  
Slate shingles over 1/2 inch plywood decks

**Underside Activity**

First Smoke (Hr:Min:Sec)	First Asphalt Drip (Hr:Min:Sec)	First Glow (Hr:Min:Sec)	Flames On Underside (Hr:Min:Sec)
00:05:15	00:24:15	NA	None

**Test Observations:**

00:00:50 Surface flames above top of brand  
00:03:07 Surface flames 1/2 foot above top of brand  
00:05:15 Smoke on underside at Horizontal Joint  
00:05:40 Brand 25% consumed  
00:09:27 Brand 50% consumed  
00:09:35 smoke stopped  
00:13:56 Brand 75% consumed  
00:15:09 Surface flames 1/2 foot above top of brand  
00:15:10 Surface flames 0 feet above top of brand  
00:16:44 Surface flames 0 feet above top of brand  
00:17:28 Brand 100% consumed  
00:19:42 Discoloration on underside at plywood joint  
00:21:49 Smoke continues on underside  
00:24:15 Asphalt drip on underside at Horizontal Joint  
00:35:36 All action ceased, test terminated.

Char Depth (inches): 1/2                      Test Duration (Hr:Min:Sec): 00:35:36

**Summary of Results:**

No portion of the roof covering material was blown or fell off the test deck in the form of flaming / glowing brands.  
The roof deck was not exposed by breaking, sliding, cracking, or warping of the roof covering.  
No portions of the roof deck fell away in the form of glowing particles.  
There was no sustained flaming of the underside of the deck.

**Pass/Fail: PASS**

Only those products bearing the UL Mark should be considered as being covered by UL.

Department 3019FPD Instrument Calibration Tracking

Data current at 10:52:45 on 2010-07-08

Procedure - UL790

File No.: R20610 Assignment No.: 10CA23622  
Client : NRCA Test No.: 2

Instrument	Last cal	Next cal	Verification date/time
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Verified by

Test apparatus (fire) was calibrated on 2010-07-08

Test apparatus (wind) was calibrated on 2010-07-08

Instruments used during test apparatus calibration:

97F04DAS / 21095	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
15FE5AVM / 20303	2010-02-19	2011-02-28	2010-07-08 07:04:39 auto
16F01IC / 21096	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
83F01CLK / 20562	2010-05-04	2011-05-31	2010-07-08 07:04:39 auto
91F04CLK / 31457	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
0221080001 / 57135	2008-02-25	2010-02-28	<No Value> <No Value> auto
190F07MD / 45863	2010-07-06	2011-07-31	2010-07-08 07:06:56 auto
199F08MD / 45792	2009-10-08	2010-10-31	2010-07-08 07:06:56 auto
97F04DAS / 21095	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
91F04CLK / 31457	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto

Test was conducted on 2010-07-08.

Instruments used during test operation:

83F01CLK / 20562	2010-05-04	2011-05-31	2010-07-08 10:09:54 auto
51F99SCL / 21857	2010-03-17	2011-03-31	2010-07-08 10:09:54 auto
190F07MD / 45863	2010-07-06	2011-07-31	2010-07-08 10:09:54 auto
199F08MD / 45792	2009-10-08	2010-10-31	2010-07-08 10:09:54 auto

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**INTERMITTENT FLAME TEST -ANSI/UL790 (Eighth Edition)**

Project: 10CA23622	File: R20610	TestCode: 07081001
Tested by: PASTOR	Engineer: RHODES	Date: 07/08/10
Employee #: 14333	44947	Page 1 of 2

The test deck was constructed in accordance with paragraph 4.2  
The roof covering material was applied in accordance with paragraph 4.4  
The test sample was conditioned in accordance with paragraph 4.5

Client Name: NRCA		
System No. 1	Test No.: 1	Deck Thickness (in): 1
Class: A	Slope (in/ft): 5	Ambient Temp (°F): 82

**System Description:**

# 30 underlayment

Slate shingles over 1/2 inch plywood decks

**Underside Activity**

First Smoke (Hr:Min:Sec)	First Asphalt Drip (Hr:Min:Sec)	First Glow (Hr:Min:Sec)	Flames On Underside (Hr:Min:Sec)
NA	NA	NA	NA

**Surface Flames**

Cycle	Test Time (Minutes)	Ignition (Min:Sec)	Flames Out (Min:Sec)	Max. flame Travel (feet)
1	0 - 4	N/A	None	
2	4 - 8	N/A	None	
3	8 - 12	N/A	None	
4	12 - 16	N/A	None	
5	16 - 20	N/A	None	
6	20 - 24	N/A	None	
7	24 - 28	N/A	None	
8	28 - 32	N/A	None	
9	32 - 36	N/A	None	
10	36 - 40	N/A	None	
11	40 - 44	N/A	None	
12	44 - 48	N/A	None	
13	48 - 52	N/A	None	
14	52 - 56	N/A	None	
15	56 - 60	None	N/A	None

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**INTERMITTENT FLAME TEST -ANSI /UL790 (Eighth Edition)**

Project:	10CA23622	File:	R20610	TestCode:	07081001
Tested by:	PASTOR	Engineer:	RHODES	Date:	07/08/10
Employee #:	14333		44947		Page 2 of 2

Client Name:	NRCA		
System No.	1	Test No.:	1
Class:	A	Slope (in/ft):	5
		Deck Thickness (in):	1
		Ambient Temp (°F):	82

**System Description:**

# 30 underlayment  
Slate shingles over 1/2 inch plywood decks

**Test Observations:**

Char Depth (inches): 1/2  
Test Duration (Hr:Min:Sec): 00:58:28

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**Summary of Results:**

No portion of the roof covering material was blown or fell off the test deck in the form of flaming / glowing brands.  
The roof deck was not exposed by breaking, sliding, cracking, or warping of the roof covering.  
No portions of the roof deck fell away in the form of glowing particles.  
There was no sustained flaming of the underside of the deck.

**Pass/Fail: PASS**

Only those products bearing the UL Mark should be considered as being covered by UL.



Department 3019FPD Instrument Calibration Tracking

Data current at 09:52:23 on 2010-07-08

Procedure - UL790

File No.: R20610 Assignment No.: 10CA23622  
Client : NRCA Test No.: 1

Instrument	Last cal	Next cal	Verification date/time
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Verified by

Test apparatus (fire) was calibrated on 2010-07-08  
Test apparatus (wind) was calibrated on 2010-07-08  
Instruments used during test apparatus calibration:

97F04DAS / 21095	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
15FE5AVM / 20303	2010-02-19	2011-02-28	2010-07-08 07:04:39 auto
16F01IC / 21096	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
83F01CLK / 20562	2010-05-04	2011-05-31	2010-07-08 07:04:39 auto
91F04CLK / 31457	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
0221080001 / 57135	2008-02-25	2010-02-28	<No Value> <No Value> auto
190F07MD / 45863	2010-07-06	2011-07-31	2010-07-08 07:06:56 auto
199F08MD / 45792	2009-10-08	2010-10-31	2010-07-08 07:06:56 auto
97F04DAS / 21095	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
16F01IC / 21096	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
91F04CLK / 31457	2010-05-04	2011-05-31	2010-07-08 07:06:55 auto
0221080001 / 57135	2008-02-25	2010-02-28	<No Value> <No Value> auto
190F07MD / 45863	2010-07-06	2011-07-31	2010-07-08 07:06:56 auto
199F08MD / 45792	2009-10-08	2010-10-31	2010-07-08 07:06:56 auto

Test was conducted on 2010-07-08.  
Instruments used during test operation:

83F01CLK / 20562	2010-05-04	2011-05-31	2010-07-08 08:53:32 auto
91F04CLK / 31457	2010-05-04	2011-05-31	2010-07-08 08:53:32 auto
190F07MD / 45863	2010-07-06	2011-07-31	2010-07-08 08:53:32 auto
199F08MD / 45792	2009-10-08	2010-10-31	2010-07-08 08:53:32 auto

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