



## HOME ENERGY SOLUTIONS

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## INFRARED WALL COMPARISON IMAGE REPORT

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### *CERAMIC SHEILD® PERFORMANCE ANALYSIS*

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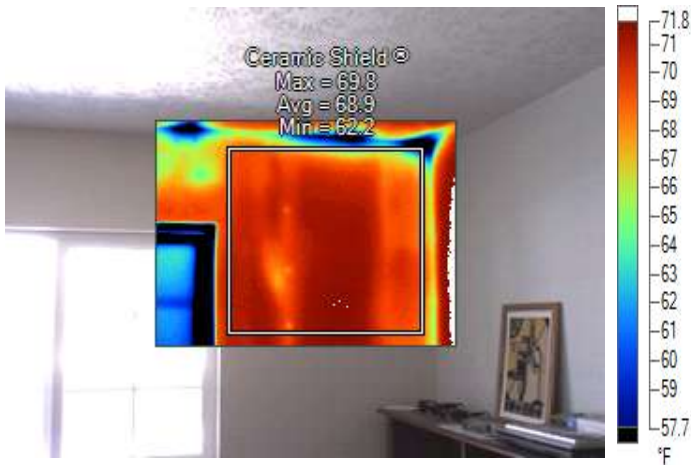
Prepared for:

## ATLAS THERMAL COATINGS

DOUG BELL  
PO BOX 2128  
El Prado, NM 87529

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### IR20071231\_0121.is2

12/31/2007 1:09:57 AM

-This Image Reflects the Ceremic Sheild ® treated section of the room wall. Average temperatures of this section of the room wall are 68.9 F and is represented by the orange/yellow color.

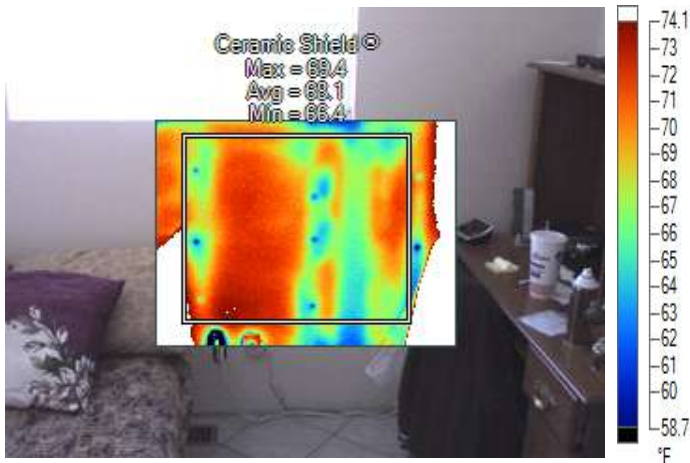
-The temperature average difference from the treated section vs. the untreated section is 0.8 F.

Emissivity: 0.46 - 0.42

-Description of Substrate: Sheetrock- Also known as (hydrous calcium sulphate) a natural occurring mineral. Found as a rock composed of calcium sulphate and water ( $\text{CaSO}_4 + \text{H}_2\text{O}$ ). Gypsum is the only natural substance that can be ground from fine powder and then restored to its original rock like state by the addition of water alone. Before the rock hardens it is pliable to be molded into any desired shape. Gypsums fire resistant qualities make it an invaluable element in building materials. Its high water content which is release upon exposure to the intense heat, it actually retards heat transfer, making it one of the most important materials used in structures where people work and play. Sandwiching wet gypsum in between two sheets of heavy paper as the core hardens it becomes a rigid, fire resistant board used to cover interior walls and ceilings.

## ***Image Info***

Calibration Range	-4.0 °F to 212.0 °F	
Camera Model	TiR2FT	
Lens Description	20mm/F0.8	
Lens Serial #	40948-5662	
Manufacturer	Fluke	
OCA Version	3.0.6.12	
DSP Version	4.7.0.0	
Emissivity	0.46	



**IR20071231\_0122.is2**

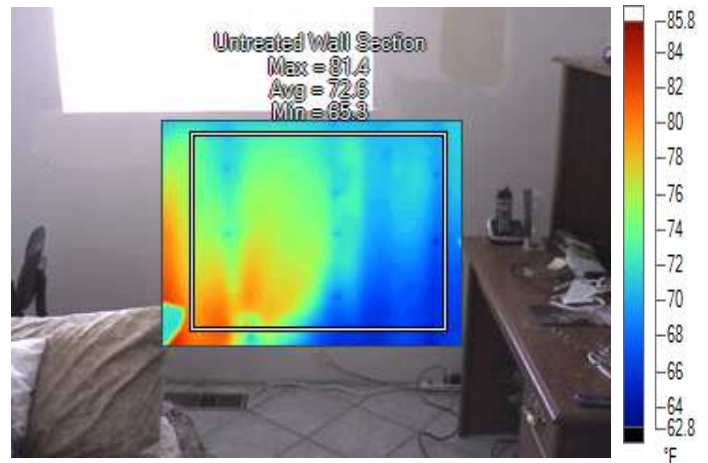
12/31/2007 1:10:18 AM

-This Image Reflects the Ceremic Sheild ® treated section of the room wall. Average temperatures of this section of the room wall are 68.1 F and is represented by the redish/yellow color.

-The temperature average difference from the treated section vs. the untreated section is 4.5 F.

Emissivity: 0.16 - 0.12

-Description of Substrate: Sheetrock- Also known as (hydrous calcium sulphate) a natural occurring mineral. Found as a rock composed of calcium sulphate and water (CaSO<sub>4</sub>+H<sub>2</sub>O). Gypsum is the only natural substance that can be ground from fine powder and then restored to its original rock like state by the addition of water alone. Before the rock hardens it is pliable to be molded into any desired shape. Gypsums fire resistant qualities make it an invaluable element in building materials. Its high water content which is release upon exposure to the intense heat, it actually retards heat transfer, making it one of the most important materials used in structures where people work and play. Sandwiching wet gypsum in between two sheets of heavy paper as the core hardens it becomes a rigid, fire resistant board used to cover interior walls and ceilings.



**IR20071231\_0122.is2**

12/19/2007 1:30:02 AM

Temperatures: Max 81.4 F; Avg 72.6 F; Min 65.3 F.

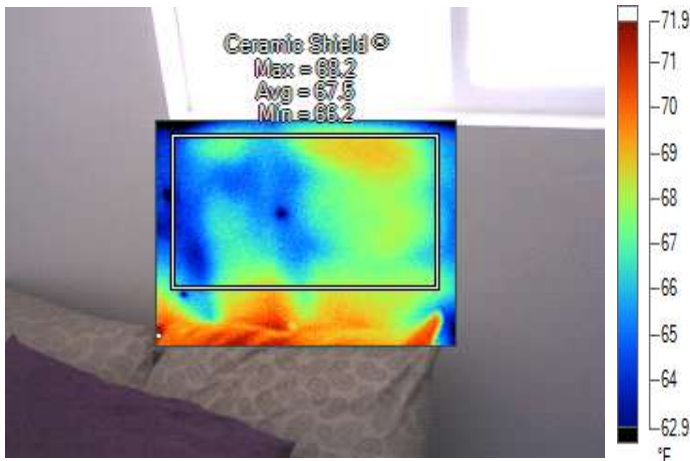
-This Image Reflects the Non-treated section of the room wall. Average temperatures of this section of the room wall are 72.6 F and is represented by the yellow orangish color.

-The temperature average difference from the treated section vs. the untreated section is 4.5 F.

-Description of Substrate: Sheetrock- Also know as (hydrous calcium sulphate) a natural occurring mineral. Found as a rock composed of calcium sulphate and water (CaSO<sub>4</sub>+H<sub>2</sub>O). Gypsum is the only natural substance that can be ground from fine powder and then restored to its original rock like state by the addition of water alone. Before the rock hardens it is pliable to be molded into any desired shape. Gypsums fire resistant qualities make it an invaluable element in building materials. Its high water content which is release upon exposure to the intense heat, it actually retards heat transfer, making it one of the most important materials used in structures where people work and play. Sandwiching wet gypsum in between two sheets of heavy paper as the core hardens it becomes a rigid, fire resistant board used to cover interior walls and ceilings.

## ***Image Info***

Calibration Range	-4.0 °F to 212.0 °F	-4.0 °F to 212.0 °F
Camera Model	TiR2FT	TiR2FT
Lens Description	20mm/F0.8	20mm/F0.8
Lens Serial #	40948-5662	40948-5662
Manufacturer	Fluke	Fluke
OCA Version	3.0.6.12	3.0.6.12
DSP Version	4.7.0.0	4.7.0.0
Emissivity	0.16	0.95



**IR20071231\_0123.is2**

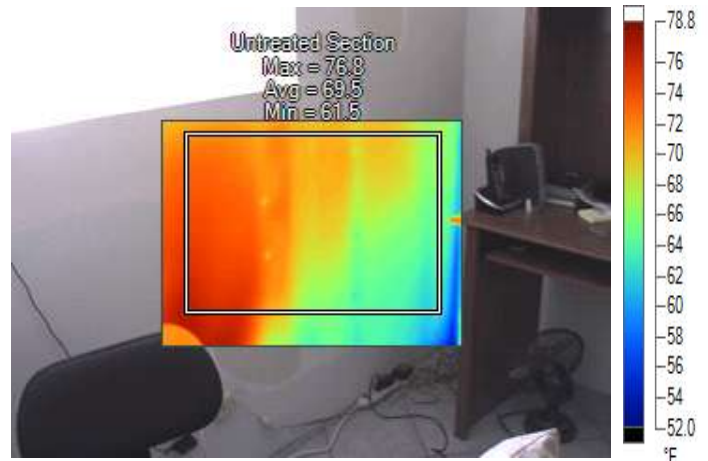
12/31/2007 1:10:43 AM

-This Image Reflects the Ceremic Sheild ® treated section of the room wall. Average temperatures of this section of the room wall are 67.5 F and is represented by the green/yellow color.

-The temperature average difference from the treated section vs. the untreated section is 2.3 F.

Emissivity: 0.23 - 0.16

-Description of Substrate: Sheetrock- Also known as (hydrous calcium sulphate) a natural occurring mineral. Found as a rock composed of calcium sulphate and water (CaSO<sub>4</sub>+H<sub>2</sub>O). Gypsum is the only natural substance that can be ground from fine powder and then restored to its original rock like state by the addition of water alone. Before the rock hardens it is pliable to be molded into any desired shape. Gypsums fire resistant qualities make it an invaluable element in building materials. Its high water content which is release upon exposure to the intense heat, it actually retards heat transfer, making it one of the most important materials used in structures where people work and play. Sandwiching wet gypsum in between two sheets of heavy paper as the core hardens it becomes a rigid, fire resistant board used to cover interior walls and ceilings.



**IR20071231\_0123.is2**

12/19/2007 1:26:20 AM

Temperatures: Max 81.4 F; Avg 72.6 F; Min 65.3 F.

-This Image Reflects the Non-treated section of the room wall. Average temperatures of this section of the room wall are 72.6 F and is represented by the green yellow color.

-The temperature average difference from the treated section vs. the untreated section is 2.3 F.

-Description of Substrate: Sheetrock- Also know as (hydrous calcium sulphate) a natural occurring mineral. Found as a rock composed of calcium sulphate and water (CaSO<sub>4</sub>+H<sub>2</sub>O). Gypsum is the only natural substance that can be ground from fine powder and then restored to its original rock like state by the addition of water alone. Before the rock hardens it is pliable to be molded into any desired shape. Gypsums fire resistant qualities make it an invaluable element in building materials. Its high water content which is release upon exposure to the intense heat, it actually retards heat transfer, making it one of the most important materials used in structures where people work and play. Sandwiching wet gypsum in between two sheets of heavy paper as the core hardens it becomes a rigid, fire resistant board used to cover interior walls and ceilings.

## ***Image Info***

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Camera Model	TiR2FT	TiR2FT
Lens Description	20mm/F0.8	20mm/F0.8
Lens Serial #	40948-5662	40948-5662
Manufacturer	Fluke	Fluke
OCA Version	3.0.6.12	3.0.6.12
DSP Version	4.7.0.0	4.7.0.0
Emissivity	0.23	0.95



**IR20071231\_0124.is2**

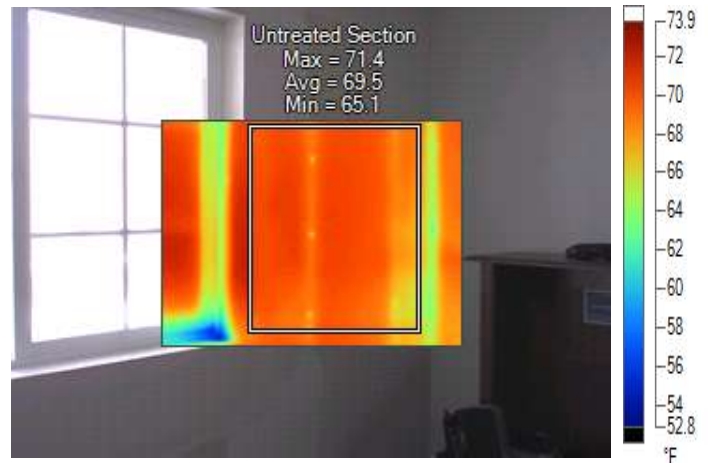
12/31/2007 1:11:19 AM

-This Image Reflects the Ceremic Sheild ® treated section of the room wall. Average temperatures of this section of the room wall are 66.1 F and is represented by the blue color.

-The temperature average difference from the treated section vs. the untreated section is 3.4 F.

Emissivity: 0.60 - 0.54

-Description of Substrate: Sheetrock- Also known as (hydrous calcium sulphate) a natural occurring mineral. Found as a rock composed of calcium sulphate and water (CaSO<sub>4</sub>+H<sub>2</sub>O). Gypsum is the only natural substance that can be ground from fine powder and then restored to its original rock like state by the addition of water alone. Before the rock hardens it is pliable to be molded into any desired shape. Gypsums fire resistant qualities make it an invaluable element in building materials. Its high water content which is release upon exposure to the intense heat, it actually retards heat transfer, making it one of the most important materials used in structures where people work and play. Sandwiching wet gypsum in between two sheets of heavy paper as the core hardens it becomes a rigid, fire resistant board used to cover interior walls and ceilings.



**IR20071231\_0124.is2**

12/19/2007 1:26:55 AM

Temperatures: Max 71.4 F; Avg 69.5 F; Min 65.1 F.

-This Image Reflects the Non-treated section of the room wall. Average temperatures of this section of the room wall are 69.5 F and is represented by the blue color.

-The temperature average difference from the treated section vs. the untreated section is 3.4 F.

-Description of Substrate: Sheetrock- Also know as (hydrous calcium sulphate) a natural occurring mineral. Found as a rock composed of calcium sulphate and water (CaSO<sub>4</sub>+H<sub>2</sub>O). Gypsum is the only natural substance that can be ground from fine powder and then restored to its original rock like state by the addition of water alone. Before the rock hardens it is pliable to be molded into any desired shape. Gypsums fire resistant qualities make it an invaluable element in building materials. Its high water content which is release upon exposure to the intense heat, it actually retards heat transfer, making it one of the most important materials used in structures where people work and play. Sandwiching wet gypsum in between two sheets of heavy paper as the core hardens it becomes a rigid, fire resistant board used to cover interior walls and ceilings



## ***Image Info***

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Camera Model	TiR2FT	TiR2FT
Lens Description	20mm/F0.8	20mm/F0.8
Lens Serial #	40948-5662	40948-5662
Manufacturer	Fluke	Fluke
OCA Version	3.0.6.12	3.0.6.12
DSP Version	4.7.0.0	4.7.0.0
Emissivity	0.60	0.95