



# FireGuard

patented

## Ceramic Mortar Joint & Resurfacing System

**Chimney Inspection Check List**

Homeowner: *Lillian Pearl*  
Address: *123 Main St., Warrenton, VA 20185*  
Home phone: *540-347-0000* Work phone: *202-321-0000*

Chimney type: *masonry* Number of flues: *2*  
Flue type: *clay*  
Fireplace(s) location(s): *first floor*  
Appliance location: *basement*

CHECK LIST	SATISFACTORY	UNSATISFACTORY
Crown	√	
Flue liners		
Smoke chamber	√	√
Firebox	√	
Thimble	√	

Comments: *Open joints between flue liners - fractures in flue liners - **NOT SAFE FOR USE UNTIL REPAIRED.***

Recommendations: *FireGuard.*

Homeowner's signature: *Lillian Pearl* Sweep's signature: *Em Dee*

# FireGuard - the most effective system available



(1) Misaligned flue liners.



(2) Gap between flue liners as viewed through electronic scanner.



(3) Fractured flue liners.

Historically, the only available method to repair damaged, defective, or deteriorated flue liners in a masonry chimney was to reline the flue. With the advent of the revolutionary **FireGuard** system, the need to reline the chimney is negated, saving time and expense.

## The Problem

During original construction of a masonry chimney, it is not uncommon for masons to improperly align the flue liners or neglect to fill the joints between the flue liners with the appropriate refractory mortar (images 1 & 2). As stated in the 2006 International Residential Code, R1003.12 Flue lining (installation): *"Fireclay flue liners shall be laid in medium-duty refractory mortar conforming to ASTM C 199 with tight mortar joints left smooth on the inside..."* Additionally, thermal shock caused by chimney fires or over-firing of an appliance or fireplace causes clay flue liners to fracture (image 3). Settling or seismic vibration during an earthquake also causes flue liners to shift and fracture.

## The Danger

The results of improper building practices, thermal shock, settling, or seismic vibration are dangerous openings within the flue area. These openings allow heat to escape the chimney, exposing surrounding framing, and flammable creosote (by-products from wood combustion) to build-up between the outside of the flue lining and the inside of the chimney casing. Should these flammable deposits ignite, the heat and quite possibly the flame could transmit to the dwelling. As recommended by the National Fire Protection Agency 211 - Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances, *"If the flue liner in a chimney has softened, cracked or otherwise deteriorated so that it no longer has the continued ability to contain the products of combustion (i.e., heat, moisture, creosote, and flue gases), it shall be either removed and replaced, repaired, or relined."* In the past, relining was the only option.

Now, you and your chimney professional have a viable, safe alternative to relining - **FireGuard**; it is the most effective product available that addresses dangerous gaps, fractures, and deterioration in flue liners.

# designed to repair damaged and defective flue liners.

## The Solution

The patented **FireGuard** ceramic system is certified, listed, and labeled by Guardian Fire Testing Laboratory, Inc. (ISO 17025) as a repair system for damaged or defective clay flue liners. The **FireGuard** system is the **only** certified, ceramic resurfacing and mortar joint repair system employing *pinpoint vibration*, which promotes maximum penetration of tight mortar joints and fractures, and a consistent coat distribution for resurfacing. Without *pinpoint vibration*, the ceramics do not penetrate tight openings nor form a solid, consistent coating over surfaces. **FireGuard** temperature rating, 3,205 F, is the **highest rating in the industry**. The unique chemical and physical properties of the **FireGuard** pure ceramic material and the method by which it is applied produce heat, acid, and water resistant surfaces that decrease dangerous heat transfer and virtually eliminate gas seepage through the flue liners. The **FireGuard** system can be installed in any size or shape flue liner.

## The Procedure



(1) A closed-cell applicator with an internal vibrator is installed in the top of the flue and winched down to the base of the flue.



(2) The **FireGuard** material is then blended and poured on top of the vibrating applicator as it is winched up the flue. The applicator is drawn up and down the flue for multiple passes.



(3) Top winch is used to pull the vibrating applicator up the flue.

## The Finished Product



1" open mortar joint solidly filled.



Fractured flue liners completely resurfaced.



1" off-set between flue liners solidly filled.



# Why you should consider the **FireGuard** alternative.

## Specifications

- **FireGuard's** temperature rating, 3,205 F, is the **highest rating in the industry**.
- The **FireGuard** system is the only resurfacing system that employs pinpoint vibration, maximizing resurfacing, penetration, and bonding properties of ceramic coatings.

## Safety

- The **FireGuard** system exceeds all I.R.C. and N.F.P.A.- 211 requirements for residential applications.

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## Cost

- The **FireGuard** process typically costs less than relining.

## Performance

- The **FireGuard** process does not appreciably decrease the area of the original flue; consequently, the performance of the fireplace or appliance will not change.

## Convenience

- The **FireGuard** mortar joint repair is usually completed in less than a day. **FireGuard** resurfacing requires 1 to 1 1/2 days to complete, with much less disturbance to the inside of the home, since the flue liners do not require removal.

## History

- Since 2003, the patented **FireGuard** system has been successfully installed, nationwide.

## Guarantee

- Limited, lifetime, factory guarantee against material failure is provided with every **FireGuard** mortar joint repair.
- Twenty-five year, limited, factory guarantee against material failure is provided with every **FireGuard** resurfacing repair - the best guarantees in the industry.

*The **FireGuard** process is protected under United States patent laws ("patented").*



**Firesafe Industries**

*safer chimneys through science and innovation*

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