



# OUR VALUE-ADDED *blog*

## Why Spray Fireproofing Density Matters

### Why Does Density Matter?

Because spray-applied fireproofing density equates to the mass of the material per cubic foot (pcf), it determines how the product performs under fire conditions and whether it meets your project's UL design requirements. **Correct density = correct performance.** As such, **even perfect thickness fails inspection if the density is wrong.**

### Density Categories

<i>Density Type</i>	<i>Typical Range</i>	<i>Where It's Used</i>
Low-Density SFRM	~12–15 pcf	Concealed areas, low-traffic spaces
Medium/Commercial Density SFRM	~22–30 pcf	Most commercial steel fireproofing
High-Density SFRM	40+ pcf	Industrial, high-abuse, or high-moisture environments

### How Inspectors Verify Density (ASTM E605)

Special inspectors take core samples and calculate density using the ASTM E605 standard. They check:

- Material weight vs. volume
- Compliance with UL design requirements
- Consistency across multiple locations

***If the density is off, the application fails--even if the thickness looks correct.***

### What Happens When Density Is Wrong

#### **If Density Is Too Low**

- Material looks fluffy or weak
- Poor adhesion → risk of delamination
- Fails inspection
- Fire rating may not be achieved

#### **If Density Is Too High**

- Material becomes brittle
- Cracking or spalling
- Difficult to achieve smooth finish
- May fall outside UL design parameters

#### **Density + Thickness = Fire Rating**

*Both must match the UL design:*

- Density = material quality
- Thickness = fire-resistance duration
- Together = code-compliant fire protection

### How DHF Ensures Correct Density

*DHF Fireproofing follows strict application and quality-control procedures:*

- Verified UL design selection before work begins
- Controlled water ratios and pump settings
- Continuous on-site monitoring of material consistency
- Coordination with special inspectors for ASTM E605 testing
- Clean, uniform, code-compliant application every time

[DHFfireproofing.com](http://DHFfireproofing.com)

*Because Quality Matters...*