



FAQ – Graphite Infused Foam Shortcomings

Message From Firestable:

We've put together the following FAQ to provide a quick, easy-to-understand overview of FS 2.0 and how it compares to other spray foam products which contain graphite. The information below highlights key product characteristics, performance benefits, and common questions about installation, code compliance, and application.

A Quick Look: FS 2.0 Compared to Graphite-Infused Foam

Characteristics	FS2.0	G.I.F.*	Notes
Meets AC377 Regulations	Yes	No	G.I.F. does not have ESR's
Cost per board foot	Less \$		FS 2.0 >20% cheaper - See cost calculator www.Firestable.com/FS_2.0
Yield per Set (Board Feet)	4,700	4000	Per PSI Publication dated 6/19/2025
Can be applied over any foamed plastic	Yes	No	G.I.F. can only go over PSI base foam
Manufactured Product to ISO 9001/IBC Audits	Yes	No	G.I.F. is over the counter SPF with untested added graphite
R-value per inch	5.0	5.7	G.I.F. -R has no audited test data
Direct Code Compliance (via NFPA 275)	Yes	No	G.I.F. has modified 2603.9 special approval – only ceilings or only walls
Patented Technology	Yes	No	Unregulated add in materials
3 rd Party Code Compliance Report	Yes	No	No 3 rd party ESR's exist for G.I.F.
Premixing:	B side	B side & ISO mixing	G.I.F. must mix both A & B forcing dangerous exposure to ISO
Standard Accessory/Parts Use	Yes	No	G.I.F. requires Nonstandard screens and clogs often
Density Accuracy	Yes	No	G.I.F. has No 3 rd Party Verification
Class 1 Vapor Retarder	Yes	No data	
Multiple Colors	Yes	No	
Storage Temperature Range	50-90	65-85	
Minimum Ambient Application Temp	32F	40F	

FS 2.0 Frequently Asked Questions

FS 2.0: A higher-performing approach to thermal barrier spray foam

What is FS 2.0?

FS 2.0 is a purpose-built spray foam insulation system engineered to provide Code compliant, verified thermal barrier performance, installation flexibility, and reliable field results. Unlike unverified modified SPF products that rely on added graphite, FS 2.0 was developed as a complete, manufactured solution backed by multiple 3rd party testing agencies, documentation, and patented technology.

Graphite-Free

Why is FS 2.0 being graphite free better?

FS 2.0 is formulated without graphite to provide significantly better fire, smoke and thermal fire performance, as well as more consistent installation, dependable long-term performance, and fewer application issues.

What's the downside of graphite in spray foam?

Graphite makes spray foam less reactive, and more difficult to spray consistently. It increases the potential for clogged equipment and uneven application if conditions aren't ideal. Further, current **GIFs do not have any Evaluation Service Report (ESR) confirming their claims**. They do not meet the IBC code requirement of an AC-308 acceptability report. In contrast FS 2.0 has a formal evaluation report as well as 3rd party fire supremacy reports documenting its approved code-compliant applications.

Does graphite make spray foam perform better?

Graphite is only mediocre flame reduction post add with unverified product critical data. FS 2.0 is engineered to deliver high performance and verified that it meets medium density foam code standards.

Why should applicators fear spraying graphite added foam vs FS 2.0?

A graphite-free formulation helps promote smoother spraying, reduces the likelihood of equipment issues, and makes it easier to achieve a consistent finished product. Further, FS 2.0 has both safety/fire certification & ESR, giving architects, engineers, contractors, and building officials a recognized reference for its approved uses unlike GIFs which has no 3rd party verified ESR.

Code Compliance & Testing

Does FS 2.0 meet AC377 requirements?

Yes. FS 2.0 meets AC377 requirements and is supported by code recognized evaluation documentation. This provides confidence that FS 2.0 is a tested and approved spray foam system designed for code-compliant applications.

Does FS 2.0 provide NFPA 275 compliance?

Yes. FS 2.0 meets the NFPA 275 protocol, the only proper testing for true thermal barrier code compliance.

Is FS 2.0 backed by third-party testing?

Yes. FS 2.0 is supported by multiple third-party tests and code compliance documentation. This provides transparency and confidence for architects, contractors, inspectors, and building owners.

Installation & Field Performance

What key benefit are sprayers seeing with FS 2.0?

FS 2.0 can be applied over both closed cell and open cell spray foam systems, and ESP/XPS thermoplastic foam, giving contractors greater flexibility during installation. All graphite infused foam requires the use of their own base foam and is limited to only a single surface (wall **or** ceiling) creating significant limitations, confusion and latent field code mistakes.

Does FS 2.0 require special mixing procedures?

FS 2.0 only requires premixing of the B-side component. Graphite infused foam requires mixing both A (ISO) and B components, increasing handling requirements and installer exposure to isocyanates - clearly identified as a safety hazard.

Can FS 2.0 use standard spray foam equipment?

FS 2.0 is designed for use with standard spray foam equipment and accessories. This helps reduce installation complexity, equipment changes, and maintenance issues in the field.

Can FS 2.0 be installed in colder conditions?

FS 2.0 has a minimum ambient application temperature of **32°F** (see TDS & Field Application Guide for details), helping contractors extend installation opportunities during colder weather.

Performance & Product Quality

What is the R-value of FS 2.0?

FS 2.0 provides an R-value of **5.0 per inch** as well as providing its fire performance. Beyond R-value alone, FS 2.0 is supported by testing and documentation designed to verify complete system performance.

Is FS 2.0 a true manufactured product?

Yes. FS 2.0 is manufactured under AC-377 3rd party Building code compliance requirements. Unlike G.I.F. foam that adds graphite to an existing formulation, FS 2.0 was engineered as a dedicated product solution.

Does FS 2.0 provide vapor retarder performance?

Yes. FS 2.0 provides **Class I vapor retarder performance**, helping support moisture management requirements.

Is FS 2.0 available in multiple colors?

Yes. FS 2.0 is available in 2 colors, Charcoal Gray and Cloud White, to support project needs and requirements.

Cost & Efficiency

How is FS 2.0 cost-effective?

FS 2.0 is designed to provide cost advantages through both material cost and installation efficiency. Compared to the graphite infused foam alternative:

- **Lower cost per board foot**
- **Higher estimated yield per set**
 - FS 2.0: approximately **4,700 board feet/set**
 - Graphite infused foam: approximately **4000 board feet/set**

Use the FS 2.0 cost calculator (www.Firestable.com/FS_2.0) to estimate project-specific savings.

Why choose FS 2.0?

FS 2.0 gives contractors, designers, and building owners confidence through:

- ✓ Direct NFPA 275 compliance – Fire performance and insulation in a single application.
- ✓ AC377 compliance
- ✓ Patented technology
- ✓ Flexible installation conditions
- ✓ Standard equipment compatibility
- ✓ 3rd Party audit to ICC code requirements.

FS 2.0 is engineered to simplify installation while delivering confidence in performance, compliance, and long-term reliability.